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BUSINESS ADMINISTRATION

THEORY, PRACTICE AND APPLICATION

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This work is especially designed to meet the practical every-day needs of the active business man, and contains the fundamental and basic principles upon which a successful business is founded, conducted and maintained. To those looking forward to a business career, this work forms the basis for a practical and systematic course in "Business Administration"

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CHICAGO

INVESTMENTS AND SPECULATION

¶ This treatise has been especially prepared by Louis Guenther, Editor New York Financial World, and presents an exhaustive treatment of all phases of investments and speculation and conveys to the reader's mind a thorough knowledge of each. It is supplemented by the writings of well-known financial experts, capitalists and successful operators. It is a modern, popular and authoritative exposition of the principles involved in investments, the science of speculation, buying for investments, short sales, stock manipulation, pyramiding, bond flotation, analysis of financial statements, etc., together with many concrete examples and helpful suggestions for the guidance of the investor and those engaged in business transactions. It is also arranged to serve as a quick reference work, and includes a complete tab'e of contents, a comprehensive index and test questions.

Walter D. Moody,
Editor-in-Chief.

INTRODUCTION TO BUSINESS ADMINISTRATION.

BY WALTER D. MOODY.

General Manager, The Chicago Association of Commerce.
Author of "Men Who Sell Things."

"The recipe for perpetual ignorance is: Be satisfied with your own opinion and content with your knowledge."

Business a contest of wits

This is an era of the greatest commercial activity the world has ever known. The development of business is one of the marvels of the new century. A few years ago science, as a factor in commerce, was little known and less appreciated. The amazing advantages to business of intellectual attainments were utterly without recognition. Today, however, business has become a contest in which the quickest perception wins, thus transforming the counting room into a battle ground upon which brain matches brain for supremacy and success.

Success—educated enthusiasm

Ah, that enchanting word, S-U-C-C-E-S-S. It does not require a magic key to unlock the door to business efficiency. There is nothing mystic, nothing mysterious in the applied method of the really resourceful men in this day of great successes, of marvelous achievements in business enterprise. The sum total is contained in two words, words that electrify, nevertheless. EDUCATED ENTHUSIASM.

Changing conditions make opportunities

The most formidable barrier to progress has always been the senseless opposition of those to whom it would be of the greatest benefit. Changing conditions are the order of the day, for enlightenment has worked wonders. In olden times, a man of affairs was obliged to guard his property and his loved ones by building a moat around his house and posting sentinels in and around his estate. The time is not long past when, because of prejudice, perversity or ignorance, many men believed that opportunity knocked only once at any man's door. Today, thanks to deeper insight, most men believe that life itself is opportunity; that the very air we breathe is opportunity; that each new day presents broader opportunities for accom-

plishing more because of better directed energy. This is not alone the accepted dogma of the man who is making his way in the world. It is the creed, doctrine, tenet or religion, whichever you may care to term it, of the great captains of industry everywhere.

New ideas count

The more successful the man, the more does he think, study, plan, as a part of his daily occupation in the development of the affairs in which he is interested. Newer and better ways to get things done is the business standard employed today by successful men in all lines. Only yesterday if a man of genius advanced a new idea, he found himself ridiculed and his innovation opposed on all sides because it was a new idea. Today, it is different. The man of ideas counts in the trend of affairs as he has never counted before.

Must keep step with changing times

Everything has a subjective reason. Progress is acting as a mighty dynamic force in changing men's viewpoint of life and things. Suppose the stroke oar on a varsity crew, while in a race against an opposing crew from a competitive institution, should suddenly stop rowing in harmony with his associates and begin to row backwards—that crew would not get very far without trouble. Suppose a lawn mower should be reversed and forced to run backwards—there would not be much progress made in cutting grass on that lawn. Varsity crews and lawn mowers must move forward. Business men must advance with the times.

A great merchant in Chicago tells a good story of his youth. He was a member of a state regiment of militia. On a certain occasion, his company was sent out on dress parade. An old maiden aunt, with considerable colonial blood in her veins, took much pride in her nephew and his company. While reviewing the parade, she was suddenly heard to exclaim: "Why, every single man in that company is out of step excepting my nephew." Most men who fail to get on in the world do not realize that success lies in keeping step—in making progress with changing conditions. They generally make the mistake of thinking that the world and everything in it is out of harmony with themselves.

New ideas worth searching for

A business man of successful experience realizes that ideas—newer and better principles of conducting business—are of the greatest value, and he also knows that it pays him to search for them. The same old way of doing things cannot longer be successfully employed month after month and year after year as under the old regime. The business man must be modern, up-to-date. The physician or lawyer finds that to compete successfully he is compelled to search

without ceasing in order that he may comprehend the advancement in treatments or procedures. "To the man who fails belong the excuses."

Demand for trained men

President James, of the University of Illinois, was asked if there was any demand from business houses for college-bred men. His reply was: "The demand has been far in excess of the supply since courses in business administration were established in our institution seven years ago. Each year has brought many more requests than we have men to recommend." Ten years ago President James would have been ridiculed for advancing this new idea for the establishment of a school of commerce in connection with a university. Today, commercial schools are a part of the regularly established courses of nearly all of the great universities of our country. Men trained in the theory, practice and administration of business will always occupy the best positions and will always command the greatest salaries.

Value of new ideas in business emergencies

All men fail at times in the accomplishment of satisfactory results in the various enterprises in which they are engaged, without being able to give an explanation. The principles that have been applied successfully for many years seem apparently to have counted for nothing. It is frequently evident that in such cases a very insignificant thing, a mere oversight perchance, has been the direct cause of the failure. To be able to put the finger on the precise cause of the lack of success in one's method would locate the cause of the disaster. Then it is that a real appreciation of new ideas is fully realized.

Men paid for what they know—not for what they do

Failure is more often chargeable to a refusal to learn by mistakes how to avoid them than it is in making them. Experience is a good teacher, but who can deny the value to be gained in learning from the experience of others, for we cannot all have the same experience or the same view of similar experiences. There are many pathways to success, but the road of individual experience is narrow and rugged. It is a commonly accepted fact that for every ten dollars a high-salaried man draws, he receives nine dollars for what he knows and one dollar for what he does. On the same basis the successful business man, employing a large force of other men, realizes that his own greatest worth, as applied to his affairs, lies not so much in what he can do himself as how much he can encourage his employes to do. In either case, his own personal knowledge is the power behind the throne.

INTRODUCTION

Knowledge in excess of present needs necessary

The man who would secure the largest net return from his individual effort in the field of endeavor, and he who would realize the greatest possible advantage from the efforts of those under his command must, of necessity, possess knowledge—indispensable perception far in excess of the needs of the moment. Discernment, like a bank account, soon runs out if it is overdrawn or if it is not continually replenished. In business the "checking system" of knowledge is the sort of account that pays best—not the "savings account system." Knowledge that is simply corked up and allowed to accumulate cobwebs and rust can avail nothing. The sharpest vinegar is procured by constantly replenishing the old stock with new.

90% failures vs. 10% moneymakers

Reliable statistics prove that only about ten per cent of all people who engage in business are successful and make money; the other ninety per cent become insolvent and fail. That is, they do not actually encounter the sheriff, or go into the hands of a receiver, but they fail nevertheless to succeed in the sense of making money, and what other possible reason can anyone have for engaging in business if not to accumulate money?

Failures due to lack of intellectual capacity

Why do so many fail? Ask any credit man and he will tell you that it is not because of the lack of capital, or other material resources, but it is due primarily to a lack of intellectual capacity, the sort of brains that dig and work and sweat until they find a way to accomplish things; brains that go to the bottom of things; brains that are always looking for better results; brains that never abandon a problem until they have found a way to solve it. A friend once told me that he inquired of the manager of a house employing some three hundred traveling men how many salesmen they had. The manager replied, "Three." My friend asked, "How's that? I am told your force of traveling men numbers nearly three hundred." "Ah, that is quite different," replied the manager; "we have two hundred and ninety-seven traveling men, but only three salesmen." Quite likely that manager's estimate was intended to be taken figuratively rather than literally, but it serves to illustrate the fact that in this great United States there are millions of men, young, middle-aged and old, who are content to plod along in a mediocre sort of way, heedless or unmindful of the fact that opportunity, knowledge, possibilities, are calling, calling, calling to them to come up higher. There are hundreds of thousands of other men engaged in business who sit idly by while their trade, like the

sands in the hour glass, slowly ebbs away, and eventually is absorbed by their more progressive business neighbors.

Moneymaking and business literature

There is still another vast army of business men—salesmen, clerks and wage-earners of all classes—who are beginning to catch a glimpse of the dawning of a new business era, the greatest the world has ever known, an era impregnated with possibilities and opportunities for those who are ready with wicks trimmed and oil in their lamps. To the earnest latter class which is really desirous of profiting by the experience of others, there is no need of elaborating the possibilities embodied in this course of reading in Business Administration. This set of books, containing valuable business data on many subjects, thousands of pages telling the story of success illustrated by trained men whose names are respected everywhere, is intended to reach all classes. There is absolutely nothing in print that can even approach or can begin to compare with it in value as a reference library for business men or excel it as a complete course of instruction for any man desirous of making the best of his possibilities and opportunities in the kaleidoscopic age through which the business world is now moving.

Practical ideas best

The more practical the ideas, the better the basis for good work. Not long since, business men generally pooh-poohed the idea of employing in the conduct of their business anything new, which was taken from the writings and experience of others, such as is contained in this remarkable series, contributed to by some of the brightest minds in the business world today. There is, however, in these days unmistakably a hungering and thirsting for just this new sort of literature. It fills a long-felt need—fills it exactly, completely, satisfactorily. Being the author of a work on salesmanship which has had a countrywide circulation, I have been literally besieged by business men everywhere asking me to recommend books treating of successful business methods, and have been chagrined to find how limited was the supply. The man who formerly was prejudiced against such sources of information must now step aside and make way for progress or unite with the popular demand for more education and better methods.

Cannot afford vs. can afford

Show me the man who says he has no patience for such things, and I will show you a man, like the stroke oar and the lawn mower, who does not believe in moving forward in progress. Show me the man who says he has no time to read of new methods and principles, and I will show you the one who utterly fails to perceive that familiarity with business literature of this kind means pecuniary advancement. Show me the man who says

he cannot afford to invest in such a set of books, and I will show you one who apparently CAN afford to waste his energy in misdirected effort—that energy and effort which are to every wage-earner and tradesman both his stock in trade and his invested capital.

Failures unnecessary

Someone has said, "There are three kinds of people in the world—the Can'ts, the Won'ts and the Wills. The first fail at everything; the second oppose everything; the third succeed at everything." I would add a fourth kind—the largest class of all —the Don't Trys, the "Oh-what's-the-use," "It-doesn't-interest-me" sort of people. Their name is legion; their fault is lack of confidence. Knowledge is the greatest inspiration of confidence to be found on earth. You may not personally be held in the hope-paralyzing bondage that produces the "Oh-what's-the-use," or "I'm-not-interested" germ, but if you are not, you are exceptional. Most people are, and that is the reason that such persons are just about what luck, good fortune or chance make them, succeeding if fortune favors them, failing if they are left to depend upon their own resources. Result: Nine fail where one succeeds.

It is very fortunate, indeed, for most men that so much of their happiness depends upon success. There is nothing on earth quite so terrible to think of as failure, especially that due to lack of effort, unless possibly it be the failure of a man who lacks the courage or initiative to try to make the most of himself, and thus lets his best opportunities escape him. And this last is really the most pitiful thing that can befall a man. It is well enough to plan opportunities, but if we had the wisdom to take advantage of such opportunities as naturally come to us, results would more often be found in the balance on the right side of the ledger. And so I am of the opinion that a clear explanation of why a very large class of people do not succeed is found in some of these expressions—"I don't care," "I can't," "It doesn't interest me," or "Oh, what's the use."

Basis of all business success

One of the great objects set forth in this Business Administration series is to supply the positive energy which begets courage, confidence, initiative and success. We want to make you feel the necessity of doing some reading, a little plain thinking, and to make as clear as possible the important things that are involved in the serious but very fine game of business.

With business becoming with each succeeding day more and more of a science, it is high time to understand what is essential to it. Speaking of the subject of "Organized Business," a great authority recently said, "It is time even for business men to understand business." Again, the purpose of this course in Business Administration is, if possible, to measure the power and principles of business, to trace their ramifications, de-

fine their elements, get hold of their vital fundamentals, and so comprehend them, both in technical detail and as a mighty unit. And I am confident we have done all this. I find that at the foundation, the machinery of business is simple, but whether it is plain or complicated, all who would succeed must make every effort to comprehend it thoroughly. All I care to emphasize at present is the great truth that knowledge, established and classified, is the basis of all business success. This is clearly established in this course of reading, and I am trying to incite your imagination in writing of its merits just as I would endeavor to enable you to realize it if I could talk to you personally right across my desk. The observant man can see clearly the things I am talking about, but to most men the mind's eye perceives not by observation, but only when the imagination is stimulated. So I would stir all men to look earnestly into these things, with a view to their personal betterment.

Business axioms simple to understand

Business is far more than business as it is commonly understood. It is a science, and it is the eager, practical minds of business men that we shall endeavor to convince first of that fact, and our reasons for addressing those principally concerned are especially good. Why? I have found that in writing about business whenever I was able to make the principles so plain that business men understood them, everybody else did, so it is to be expected that if business axioms can be made simple enough for business men to understand them, everyone will apprehend them. Everybody. And it is everybody that we are attempting to reach.

Knowledge is power

For nearly thirty centuries men have recognized the concrete wisdom of Solomon's proverb: "A wise man is strong; yea, a man of knowledge increaseth in strength." Yet we have been slow in making its application universal to the race. But we are beginning to understand that the power inherent in knowledge applies as well to commercial and industrial as to scholastic, political and social life, as well to the counting room as to the pulpit, as well to the shop as to the university, as well to the farm as to the bar. Knowledge is power and is the only source of real intellectual sovereignty that the Creator has ever entrusted to men.

In conclusion, I would say that these words are addressed to the business men of America, and this designation includes the banker and his clerks, the farmer and his sons, the lawyer and the law student, the financier and the man who sells bonds and stocks, the merchant and his clerk, the accountant and the bookkeeper, the manager and his assistants—the ambitious young men of the Twentieth Century type, contemplating the pursuit of any business, trade or occupation.

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INVESTMENTS AND SPECULATION.

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INVESTMENTS AND SPECULATION.

BY LOUIS GUENTHER.

[Born London, England, 1874; son of Otto Guenther and Rosa Guenther; came to United States at age of three years; attended Public Schools of Milwaukee, St. Louis and Chicago; showed inclination for Journalism, publishing during his school days two different papers, one of which proved quite a success as a weekly; after leaving school entered into the general advertising agency business as a solicitor; branched out as publisher, establishing in 1896 the Mail Order Journal; in 1903, started The Financial World in New York to discuss investments in a manner that could be readily understood by the masses, resulting in establishing a financial journal which has gained widespread circulation and influence.]

PART I.

INTRODUCTION.

Every head of a corporation, every business man, in fact everyone employed in a responsible position and upon whose judgment the success of an enterprise largely depends, should provide himself with a general knowledge of the problem of investments and speculation.

Investment and speculation are so closely associated with the well-being of trade that the two are inseparable. Figuratively speaking they are the propelling forces governing the money market, which in turn is the vital lifeblood of business. This is an indisputable fact. It cannot be denied.

Many a merchant and many a manufacturer who has mastered the problem of investment and speculation has been able to put his knowledge to great financial advantage in his ability to foresee a drain upon the money market and its consequent effect upon interest rates by providing for all his banking accommodations long before interest rates have hardened.

So, also, have they been able by anticipating a depression in trade to curtail expenditures and guard their credit accounts from weakness. Such a knowledge prevents them from being caught off their guard by a sudden dropping off

in business. And, vice versa, they are in a position to detect a revival in trade by the same barometer, the money market.

As it is also true that business, whatever may be its nature, is a calling, purely confined to the making of profits sometime or other, surplus funds are accumulated which are intended for investment. The intelligent and safe investment of such idle funds requires a general knowledge of investment and speculation. Fortified with such knowledge the owner of surplus funds guards himself from serious errors. It inculcates in him the absolute importance of being guided by actual facts and not by hearsay advice of others. It can harm no one to know how to differentiate between investments and speculation; it can only benefit him.

The author of Investments and Speculation in this series on Business Administration has taken an unusually dry subject and handles it in a style which makes it interesting reading. While not a text book in any sense of the word it still exhaustively covers Investments and Speculation and its different phases so that it conveys directly to the reader's mind a thorough knowledge of the fundamentals of each. Not only will this book prove a great help to all business men but equally instructive to any who have an ambition to enter the banking or brokerage business.

This reference book presents an exhaustive treatment of all phases of Investments and Speculation, furnishing the thoughtful reader with reliable information for guidance in business transactions.

I. DEFINING INVESTMENT AND SPECULATION.

Defining the difference between investments and speculation will not prove an easy task, as there are no fast and set rules to distinguish the one from the other.

The lexicographers commonly describe the word investment as follows: "To lay out capital in the purchase of property for permanent use as opposed to speculation."

And then they state that speculation is: "To make a purchase or investment that involves risk in the hope of probable gain"; again, "As a more or less risky investment of money in expectation of considerable gain."

It is plain to see that in each case the word means the employment of capital for gain. Broadly speaking there is no distinction between the two methods of laying out capital, beyond that made in the public mind by the measure of risk involved. In human experience it has often turned out that such measure of risk has so changed, from what seemed, on the yesterday, to have been surrounded by all the safeguards against loss, as to embrace all the elements of hazard on the morrow.

This may appear rather a strange statement. Still it is an indisputable truth. A simple example will easily establish it: For instance, there is no safer investment in the mind of the public than a government bond; at least so far as our own government bonds are concerned. Suppose, however, a government was conquered and its possessions invaded by the forces of a foreign foe, what would be the natural outcome of such a disaster? The securities issued by the stricken nation would rapidly decline in value, through the apprehension aroused among investors over the uncertainty as to how the invaders would deal with the nation's creditors. They could, if they so desired, wipe

the slate clean of all debts, or they could compromise or they could pay in full. Yet, as long as it is not known just what the outcome would be, the quotations of all the nation's obligations would fluctuate violently. As securities, in regard to the safety of the funds invested in them, they could not properly be classified as investments.

Of course, such a turn of affairs with us is a remote contingency. I mention it as an extreme possibility, merely to emphasize my statement that there are really no immutable rules which will make an investment an everlasting investment. Often, unforeseen events will reverse an investment into a speculation or change what at one time appeared a risky speculation to a very desirable investment.

It was not very long ago, measured in years, when our government bonds were looked upon by foreign investors as more or less a speculation. This was during the dark days of our Civil War, when it seemed as if Gladstone, the British Premier, spoke the truth when he declared a new nation was born by the secession of the Southern States from the United States of America. The bonds then issued by our Government to raise money to carry on the war were viewed with suspicion in England. Only the German and French investors took kindly to our securities and then only after they were obtainable at bargain-counter terms.

Nor does a clash in arms between nations always tend to have a serious effect upon their securities. It sometimes happens that economic influences depress their values to such a degree as to make them a poor investment for those who placed their money in them when they were regarded as gilt-edged securities and were bringing high prices. This is what has happened with British consols, as the government obligations of the English nation are called. They have steadily declined in price until this year they have fallen to the lowest price in nearly eighty years. I shall not here enter into a discussion of the causes responsible for

this abnormal decline in one of the premier securities of the entire world. I cite it only as another illustration in support of my contention that the dividing line between investment and speculation is very elastic.

What may be good today, may be worth much less tomorrow or even worthless.

A mortgage upon a building or a parcel of land may be a very desirable investment. An upheavel of nature's forces may occur on the spot where the pledged land is located and destroy all the value in less time than it takes to write this paragraph. Did this not happen in Pompeii? Can it not happen again? The ashes of Vesuvius in a few hours swept into total destruction all the capital permanently laid out in homes and in other structures of the doomed city. An earthquake attacked Messina only a year or two ago. While Messina was not completely destroyed, the catastrophe did irretrievable harm to capital permanently invested in property. And that capital, in the light of subsequent events, could they have been foreseen, could not be properly classified as being invested, since it was at all times subjected to extraordinary risks, risks such as are grouped under the term "speculation," as commonly understood.

Men make values, not conditions; these they merely assist in making. As long as values are thus made, uncertainty, naturally, will surround them. If the human race preferred stones as money, gold then would have no value. What gives gold its value is its acceptance as a common and standard medium of exchange. Anyone will take it in return for some commodity or article he wishes to sell. It is the distinction mankind makes between the degrees of security which defines the division between investment and speculation.

The foregoing is a demonstrable fact.

It is popularly supposed that a bond or a mortgage is an investment because there is pledged to secure them

some physical property. However, this is not always the case. The property securing a bond may be worth all that it is represented for the purposes for which it is pledged, but, should it be employed for other uses, might not realize anywhere near the sum represented by the bonds. So also with a mortgage.

There are bridges on some of our principal railroad systems that were built with the money raised from the sale of bonds. As long as the railroads use these bridges and pay rental for their use, these bridge bonds are desirable investments, but, should the railroads abandon them, from where would the interest for the bonds come? The property, as old iron and steel, would never realize the capital invested in them. So might be the case with a mortgage on a water power plant. If the water supply should become exhausted there would be no need for the power plant and its machinery and the essential security which had made the mortgage a good investment would pass with the passing of the water.

Investment of money is, therefore, wholly a problem of human judgment insofar as safeguarding it against what are commonly assumed to be extreme risks. In fact, it is in a sense a security which human judgment aims to keep free from all hazard as far as it can make this possible. It is taken for granted from the very beginning that speculation involves taking chances for extraordinary gains.

II. THE INTELLIGENT EMPLOYMENT OF CAPITAL.

It is best, under the circumstances, to eliminate from consideration all hazards to investments caused by the caprices of unforeseen forces and conditions which human judgment and foresight are powerless to control.

As much as they may interfere with the intelligent employment of capital, so likewise is their effect on the duration of human life.

It is as possible for a parent to feel certain beforehand that his new born offspring will reach the scriptural age of three score and ten, as it is for an investor, no matter how careful he is in his selection, to positively assume the absolute safety of the capital he has laid out in a given security.

However, we do know, in determining the length of human life, the average age reached when the simple rules of health are carefully followed, and no fatality, whether from accident or disease, intervenes to cut it short.

So is it also the case with investments. By observing the ordinary precautions they can be safeguarded against almost every contingency except unknown eventualities.

Large investors even go so far as to protect themselves against unexpected surprises. They diversify their investments. That is, they distribute their capital among different securities.

On a principle somewhat similar to this, the life insurance business is based. Instead of selecting their risks, life insurance actuaries have successfully worked out a standard mortality table. This table is wonderful for the degree of its accuracy in determining the average death rate. By means of this mortality table life insurance com-

panies can tell almost to the exact figure, the number of people out of every thousand who will die each year.

Underlying their mortality table is one broad law, which is that each person, before being insured, must be physically free from all traces of disease which can terminate fatally. Still this is but the law of averages, only by another name. Although not recognized very many years, not over seventy-five years at the most, this law has more than justified itself as a reliable measure of safety, and the proof is the enormous assets the life insurance companies have accumulated. Collectively, their assets mount up into the billions of dollars. They represent the funds that are the bulwarks of protection for outstanding policies of between ten and fifteen times as much.

In a similar manner are fire, marine and other lines of insurance operated. All their premiums are based on different average tables. Moreover, the same principle is now applied, more or less, to investments. That is, our large banks and institutions with millions in capital at their command, divide their investments among different classes of securities as an insurance against all risk. In this way, financial loss resulting from an unforeseen hazard is so distributed as to cause very little harm, and risk is reduced to a minimum.

Even different states have enacted laws for the protection of savings bank depositors, laws based on the theory of averages. These laws govern the character of investments in which savings banks are permitted to place their funds. Some states demand of a railroad, before its bonds are acceptable as an investment for savings bank deposits, that it has paid dividends on all its outstanding stock uninterruptedly for a certain term of years; again that only first mortgages on real estate can be considered desirable and safe investments, and then only up to a certain amount of the property's appraised value. Loans to depositors are also limited. In some states, loans are restricted to not

more than 10 per cent of a bank's capital to any one customer of the bank. Other states have empowered commissions for the purpose of supervising the issuance of new securities by corporations as a protection against inflation. Even cities, towns and counties are now forced by statutes to keep their bonded obligations within a certain percentage of the assessed value of their taxable property. All these precautionary measures are adopted for the protection of investors and as a check against reckless banking. It must be remembered that bankers must invest their deposits and make loans to pay interest to depositors.

Often you will read in the descriptive circular regarding a bond that it is a legal investment for banks in certain states. This means that the corporation issuing the bond has strictly complied with the laws of these states.

Investors accept the fulfillment of the requirements of some of the states before a bond becomes a legal investment for their chartered banks as the hallmark of a high-class security in much the same confident manner as they regard the "sterling" mark on silver ware as a sign of its purity. On the whole, however, investments in this country have proved unusually satisfactory.

While it is simply impossible to estimate accurately what the per cent of losses has been on investments which have proved disastrous, nevertheless it may be taken for granted that when laid side by side with the enormous volume of capital which has been invested in securities in this country, it comes to but an infinitesimal part of the whole. As the country grows more settled, the per cent of loss will gradually lessen. Such is the characteristic of every nation as it grows older. Take England, for example; also France and Holland; Germany and Austria, only in a less degree. The resources of each of these nations have been so scraped over by capital in its search for opportunities of profitable employment, that they no longer offer the investment pos-

sibilities they once did. As a result, the majority of their government and municipal obligations, their railroad securities and their land and real estate mortgages, command in their leading financial market places, a premium which reduces the average income they yield to not much more than 3 per cent per annum. There is always such a large demand for these securities that they are scarce. Ultra conservative investors prefer them, and are willing to forego a part of the income which is obtainable from securities of lesser safety to secure, on the other hand, the greater degree of safety for their invested capital.

And right here it is as appropriate as anywhere else to explain briefly a fundamental law governing investments, as well as speculations. I refer to the economic law of supply and demand which is as immutable in influencing the prices of securities as it is in deciding the price of all our leading commodities. Artificial manipulation may stay the operation of this law but only temporarily; sooner or later it will express itself. The panic of 1907 is the latest illustration of the immutability of this law of economics. Security prices had been held up by sheer force for a year previous, against the lessening available supply of capital, only to finally break through the insecure support when all artificial means had exhausted themselves.

It is a natural sequence for investments to rise in price where the demand for them outruns the available supply. Vice versa, it is true that their prices decline when the demand is small and investments seeking buyers glut the market. It is this rising and falling in demand and supply which causes the fluctuation in prices; not only in securities, but likewise in wheat, cotton, hay, barley, oats and even in the precious metals. Even gold, the accepted standard for coinage among all the principal nations, is a willing subject to the operations of this law. Some of our foremost economists contend that gold in recent years has been mined in such large quantities as to

cause the higher cost of living, and correspondingly to reduce investors' income.

You will think this is a strange theory. You will also wonder how this can be possible. Still their contention is logical. The more gold there is, the greater is a people's purchasing power, and as it increases, the demand forces prices up. On the other hand, however, the income on a secured investment is fixed. A bond or a mortgage may have been purchased some years ago at a price to yield an income of 4 per cent annually, or $40 on each thousand dollars. At the time of the purchase the income may have been attractive. At the same time a suit of clothes may have only cost $30, a hat but $3, and a pair of shoes, $4. Five years hence the same suit of clothes may cost $35, the hat $3.50, and the shoes $5, but the investor holding a 4 per cent bond or a 5 per cent first mortgage derives no greater income, although his purchasing power is considerably reduced.

The peculiar conditions in England, France and Holland heretofore mentioned are recalled for no other reason than to show that the United States is assuming somewhat the same characteristic.

The investors of these countries for lack of opportunities at home pour millions of their capital every year into the development of the resources of their colonies and of other countries.

While our country is far from exhausting its almost unlimited resources, it has been apparent for some years to keen observers that the wealth of our people is reproducing itself at such a rapid pace as to supply far more fresh capital than is needed at home and therefore every year finds us with a great deal of money to spare for investment in other countries. We are taking our place side by side with England and France as a free and generous lender of capital to smaller but growing nations.

Only since the close of the Spanish War has the United

States participated with much older nations in lending money to Japan, China, Mexico and the South American Republics. In less than fifty years, and of that more within the last twenty years, has this country attained that position of affluence which frequently prompts the reference to us as the land of a thousand millionaires. Yet beneath this phenomenal growth in wealth must be the intelligent employment of capital. What does this mean, but the making of shrewd investments? Were this not a fact, we could hardly have financed the Civil and Spanish American Wars, built over 300,000 miles of railroads and double as many miles of local traction and interurban lines, vast public improvements, splendid harbors, and gas and electric light plants, opened up mines of coal, silver, copper and gold, built immense refineries and smelting plants, and reared all about us industries, veritable industrial Goliaths in the great wealth they control and in the great amount of labor they employ.

If George Washington were to come back to life, he would be lost in amazement at the changes wrought in this country, although only a little more than one hundred years have passed since he was laid to rest at Mt. Vernon.

It would seem to him as if some wizard had visited the land and wrought this remarkable change. Yet this wizard has been none other than capital—money profitably invested. Have we not here a concrete example of the uniform success of intelligent investment? Does it not plainly indicate that where prudence is exercised in the diversification of investments, there need be little fear as to the outcome of, or regarding the safety of, the capital employed?

III. THE EARLIEST INVESTMENT.

Now, what are the types of securities which logically can be classified under the head of investments and are not speculative?

In the first place, they are the securities which are considered safe, both in respect to the capital invested in them and the income yield.

In the second place, they are securities whose market value is more stable and are not affected by violent fluctuations as sometimes, and often, too, influence securities of a speculative character.

The major portion of investments is composed usually of those behind which is pledged for their protection some physical property or a contract agreement guaranteeing the prompt payment of principal and interest by the issuing party and which covenant can be legally enforced as long as the debtor is in a solvent condition. However, there are some shares of stock in corporations and railroads which are regarded as investments because of the long period during which they have paid substantial dividends without interruption.

It is therefore to be clearly seen that there cannot be too close a dividing line drawn to differentiate investments from speculations. In every case each must be appraised by its individual qualities and not by a yard stick. A pledged security, that is, a security behind which there is some sort of lien or obligation to pay without reservation, may prove, in case of insolvency, not to be an investment but an outright speculation.

As there are so many different kinds of securities grouped among investments, I have thought it best, for the sake of avoiding confusion, to start at the very beginning

with the earliest known type of investment and in sequence describe each in its turn until we have run the entire gamut over. At the same time it is also well to summarize briefly some of the elemental features by which the conservative investor determines in his own mind the degree of their safety as a security for his capital.

Loans on farm lands are no doubt the earliest form of investment. This is to be supposed, since the first and principal occupation of civilization was agriculture. Originally, such loans were made in a most primitive way. When the human race was young and acquiring its first taste of civilization, it was the practice of one land owner who prospered above his neighbor from the bounty of Mother Earth, to make loans of seed or live stock on consideration that he receive in return a certain portion of the borrower's next season's harvest or a certain number of the offspring of the live stock loaned.

But as civilization made progress, it was found far more convenient to settle for all obligations by the payment of gold and silver. Still in those early and primitive days, when the commercial relations between men and races were carried on crudely, lenders of capital were satisfied to accept the pledges of borrowers as men of honor who agreed to pay their loans on a stipulated day or forfeit their land, cattle, implements or whatever they pledged to secure them.

Out of such transactions grew the modern indenture. By this is meant the mortgage or contract which today legally binds the borrowers to reimburse the lender for a loan with a stipulated rate of interest and empowers the holder of the mortgage to proceed by law, or, as it is known, foreclosure proceedings, to take possession of the pledged property and dispose of it in order to protect himself against any loss of capital and interest.

The phrasing of mortgages has undergone considerable changes. There was a time when the holder of a

mortgage could take possession of property upon default of payment and keep it all. Now, however, the law goes so far as to protect the lender in maintaining his full rights in what equities may exist over a loan. That is to say, every dollar realized above the face of a loan, the accrued interest and all costs involved by what legal proceedings are necessary to enforce payment, revert to the lender. The mortgage today is a legal instrument devised to protect lenders of capital to the extent of their loans, interest due and all costs, but no further. It does not give them any unfair advantages over distressed creditors.

Not only are loans on agricultural lands the oldest of any we have a record of, but they have also proved the most satisfactory. Of the world's available capital a very large, if not the largest, portion is invested either outright or loaned out in farm land and other real estate, also in buildings and homes used by the world's population as places of domicile.

Moreover, what makes loans so satisfactory when placed on the individual's home or farm is the fact that a man will go to extreme lengths and exhaust all his available resources to satisfy a mortgage and continue the prompt payment of interest as it falls due, rather than lose the place he calls his home. Next to the immediate members of his family, his home is dearest to him. This is why such loans are regarded as having in addition to the physical assets pledged as securities, another—the moral asset, the pride of the individual in keeping a roof over his family.

IV. HOW FARM MORTGAGES ARE PLACED.

Our small interior banks are by far the largest lenders of capital on farm mortgages. Insurance companies come next and after them follows the private investor. That this should be the case is largely the outcome of a community of interest. Banks and private bankers in the small towns and villages which are the hubs for farming sections, must depend principally upon the tillers of the soil for their business. The deposits of the latter they in turn lend out to their customers on the only collateral the farmers can offer, their land, live stock or crops.

These bankers also, knowing more intimately the value of the farm lands by which they are surrounded, feel a great deal safer about their loans when they are put out on such collateral. Yet their aggregate resources, and they are by no means small, have often proved insufficient to finance all the farm loans sought.

In the North, South, East and West, everywhere, in fact, where there is found a prosperous farming community, there are also located brokers who do nothing save to make loans on farm mortgages, which in turn, they sell to institutions and investors, for whom also they act as agents for the collection of interest and principal when the mortgage matures. The banks also frequently find it to their pecuniary advantage to let outside investors have part of their farm mortgages, for the more often they are able to turn over their loanable funds, the more money can they make.

The large insurance companies, on the other hand, are impelled by two reasons in diverting part of their large resources to farm loans: The first is the necessity to diversify their investments, and the second is that the legal rate

of interest in different states varies to such an extent that it affords them the opportunity to increase their income yield on all their outstanding investments.

For example, the legal rate of interest which may be charged by lenders of money in Illinois is 6 per cent, but in Georgia it is 8 per cent, while in some of the far western states as high as 12 per cent can be demanded. This difference in the rate of interest borrowers must pay is not brought about, as would seem to be the case, by any variance in the degree of safety in the collateral they furnish, but is determined by the abundance or scarcity of available capital. Such states as New York, Illinois, Indiana and Massachusetts are more fortunate in the abundance of capital than less favored states and this is what makes it possible to borrow at a smaller rate of interest than in the less populous states. In fact, in these more settled communities, capital, in its eager hunt for desirable loans, comes so much in keen competition as to offer itself at less than the interest which the state has fixed upon as legal. Thus it happens that in Massachusetts, Illinois and other eastern and central states, the owners of fertile and productive farms can, without difficulty, obtain loans on a 5 per cent basis.

Although Georgia may have lands whose out-turn of cotton and other crops indigenous to her soil will bring as much profit as the wheat and maize of the loamy, black belt of Central Illinois, her wealth is not sufficient to finance all the needs of her people and she must provide a legal interest rate attractive enough to draw to her capital which is beyond her borders. Therefore, it is an axiom that the less populated a state, the smaller her resources and the more are her people dependent upon capital from the outside, for after all, money is but a commodity to be bargained for and which lets itself out at the best price obtainable by its owners.

In different states the rules vary as to the extent that

loans may be made on farm property. In some places where farm lands, because of their productivity, are in eager demand, money may be borrowed on them up to 60 and even 70 per cent of their supposed market value, whereas in states where the farms are still comparatively new and which lands capital believes are not as readily saleable in the event that they must be sold to satisfy the loan, their borrowing capacity is restricted to a much lower percentage. It is the demand for the land which determines the equities insisted upon before a loan is obtainable, and not so much the fertility and productiveness of the land itself. So also is it true of the interest that is exacted from borrowers.

Without a brief mention of an interesting development in the placing of farm mortgages, the history of this form of investment would not be complete. I have in mind the large business that is done in farm mortgages today among the class of smaller investors who, while not in a position to purchase such securities outright, are still favored with an opportunity to place their capital in them.

From the demand of the smaller investor for farm mortgages as their ideal type of security, large companies have come into existence which sell notes of their own, secured by farm mortgages. The capital they obtain from the sale of their obligations, they place out in farm mortgages, which mortgages are in turn deposited with some trustee as a security for their pledges to their clients. These notes are quite often known as debenture bonds and sometimes they are otherwise designated, as, for example, a large western concern distinguishes them from its competitors in the same business, as land grants, although they are in form alike and are sold in as small denomination as $100. These institutions have made it so attractive to small investors as to make it possible for them to purchase the notes by making a partial payment and paying off the balance in easy periodical payments.

V. THE INFLUENCE OF LOANS ON MONEY.

At times the borrowing requirements of our farmers play a very important part in our economic life. They must move their crops, and money alone is what will do this. Thus it happens, that, around harvest time, the interior banks find it necessary and profitable to advance money to farmers on their notes, secured by their crops, until they can send the produce to the central markets.

It has often happened that these loans have been precursors of a tight money market at a time when the available capital of the country has been insufficient to finance both the movements of the harvest and the expansion of industry. While a tight money market may be produced by other causes, more often it is superinduced by this annual crop demand upon the resources of our banks.

When this effect is produced in our financial centers, it is called a pinch in money. No doubt you have heard of the term. As a business man and accustomed to negotiating loans at your bank, possibly you have personally felt its effects when your banker informed you that it was necessary to increase your interest rate until money became easier.

By advancing interest rates, bankers aim to keep down loans within their available resources. Our peculiar banking structure is responsible for a condition which spares none of the banks from the effect of the tightness in money. Our banks depend one upon another. Their interests are so closely inter-related and co-operative, that, like tiers, they are built one on top of the other, the largest institutions at the bottom; the smallest at the top.

How this is possible, I shall proceed to illustrate. Underlying the interchangeability of banking credits, which

is but another name for the transaction of business between banks by check, are what are known as reserve centers. For our national banks, which are the institutions chartered by the National Government, certain and principal cities like New York, Chicago, Boston, St. Louis, Cincinnati, etc., are selected as reserve centers. Custom and convenience alike have made them also reserve centers for state banks, trust companies and private bankers.

In the banks, at these points, it is the practice of interior banks to maintain deposits on which to issue checks and drafts. Customers are constantly sending money to these large commercial centers, and it would prove rather inconvenient and also expensive, every time a demand was made upon them for a remittance to these centers, to ship the actual currency. Hence the funds they keep on deposit in the large reserve centers.

The banks in the reserve centers usually allow interest on the deposits of other banks. To pay it they in turn lend their deposits out in such manner and form as to make such loans easily liquidable. This is accomplished by an expedient known in all financial circles as lending on call to distinguish loans of this character from time loans. Call loans are different from time loans, in that as the principal can be demanded, in the discretion of the bank, at twenty-four hours' notice to the borrower, time loans cover a definite period of time.

Where there is such discretionary power vested in the banks over a certain form of loans, it is readily apparent what influence may be exerted over the money market when in the fall there arises a demand by the country banks on their deposits held in the banks in the reserve centers. This is often so heavy as to be beyond the ability of the reserve center banks to care for comfortably. One may also readily understand the solicitude of financiers and stock market speculators over this periodical drain and why they so studiously watch for any signs of its advent

and try to forecast its effect, since it means so much to them in the success of their operations.

A great deal of money is borrowed in the large commercial centers on call, not always willingly, for bankers will not lend heavily except in this way. Speculators are also often forced to finance their operations with such loans and therefore it behooves them to keep their thoughts on the pulse of the money market, to prevent being enmeshed in a money pinch.

The harvest call for funds has caused call money, which could be borrowed only a few days previously at as low as one to two per cent, to mount up and up until it has reached as many hundred per cent per annum for its use for a few days. The interior banks keep drawing on their deposits until their depositories, to maintain their own deposits within the legal requirements, are forced quickly to run up the rate of interest, to force the liquidation of loans until their cash position is again a comfortable one.

Of course a tight market is not always superinduced by the withdrawals of deposits by the outside banks. Capital may be in such abundance at the time as to make the drain scarcely perceptible. It is only when the liquid capital is not sufficient to go readily around among all classes of borrowers that it makes itself felt by such a phenomenon.

When such abnormal interest rates as mentioned prevail, speculation is rather precarious and unattractive, except to those who are sellers of securities, and need not borrow money, since only in rare instances do the security markets escape a severe decline in prices when call money commands a high premium of interest.

The above serves to illustrate the intimate relationship between the rural community and the city—how much the one influences the other through the flow of capital between them and how essential they are one to another.

VI. CITY REAL ESTATE COMPARED WITH FARM LANDS.

By no means is it as simple to wisely select investments in real estate in large cities as in farm lands. Where once a thorough knowledge about the fertility of agricultural land and its nearness to a market has been gained, there is a fair basis for safely determining its value for either the purpose of outright purchase or as collateral for loans.

But it is necessary to apply different methods to city property. Location, conditions, the density of population, as well as other factors peculiar to each urban community, have much to do with its value. Under favorable conditions and environment a parcel of city land may undergo a phenomenal appreciation. Again, changes may occur to cause a sharp decline, especially where property has gone up too rapidly. Real estate booms are not always the healthiest thing for a community; sometimes they peter out fast.

The congestion of population in certain localities has been remarkable, so much so as to result in making the owners of property fabulously wealthy. That was because the land, being a stationary quantity, always located in the same place, had to serve the requirements of a multitude instead of a few. It stands to reason that the more the land is required by a population, constantly growing in density, the higher prices will it command.

We see and we wonder at the prevailing tendency, so noticeable in our large cities, to build high up in the air. But this is not strange or something to marvel at, for where land has become valuable, as happens to be the case in our many large cities, it has become, from an economical standpoint, much cheaper to reach up than to spread out over the ground.

Nowhere else have we a more graphic illustration of this development than in New York City, situated, as it is, on a small island, its boundaries restricted on all sides by water. Almost all the available property is already occupied. The city's area is insufficient, and each year growing more so, to provide comfortably for the density of the population, with the natural outcome that the city has become a city of skyscrapers, each one vieing with the other in a frenzied effort to pierce the clouds with its altitude. Nor are all these tall structures confined exclusively to the business sections. Residential property has also become scarce enough to force the community to erect row after row of tall apartment houses, providing homes for hundreds of families as a measure of relief from the pressing demand from the population for living quarters. Similar conditions, although in a lesser degree, prevail in our other large cities.

Where land is in such great demand, as is the case in New York City, the natural evolution will be for a continuous enhancement in value. To what astonishing lengths this appreciation can sometimes reach is startlingly illustrated by a sale made a few years ago of a small piece of property in the financial district of New York, barely large enough for an ordinary sized dwelling, at a price unheard of before—a price of $600 a square foot. By erecting on this property a tall office building the investment was made to pay. It was not difficult to fill the structure with enough tenants willing to pay rents high enough to bring a satisfactory income on the money put into the building.

Four hundred years back, what only one square foot of this property brought would have purchased the whole island of Manhattan, for the value of the trinkets Peter Minuet turned over to the Indians in order to acquire possession of it, was hardly worth more than $600. Yet were this land not serving a dense population and situated where

it could not be used for anything else than agricultural purposes, it would be almost worthless, as it is incapable of producing any vegetable life, so rocky and barren is the soil.

The growth of our urban population has opened a field for the exploitation of capital on a scale, the magnitude of which is almost inconceivable. It has made it almost compulsory in the purchase of a great deal of such real estate to depend in a large measure on borrowed capital. Savings banks especially, find it profitable to place a greater part of their deposits in loans on city property in the form of first mortgages. But as a safeguard they confine their loans to improved property already used for either business or residential purposes and bringing an income.

The savings banks are restricted by law to such loans to prevent their deposits from being tied up in property not producing any revenue. The idea is that this last-named class of property is not quickly saleable.

Where the individual investor places his capital in loans on city real estate, whether he assumes the entire loan or but part of it, he should exercise the greatest care in selecting the property which is to serve as his collateral. The title to the property should be without a flaw, otherwise a cloud will be upon it, acting as a bar to its free and quick transfer. Without a clear title no loan should be made. Again all loans ought to be confined to a certain proportion of the appraised value of the property to provide a sufficient equity to protect the loan. Real estate values can easily be ascertained. This information is readily accessible, for every city keeps a careful record, for the purpose of collecting taxes, of all transfers of property and these records are open to inspection.

Even here modern methods have simplified this necessary work of investigation. In every city of importance, institutions have grown up which make it their business

to search real estate titles and for which service they charge a nominal fee. Their records are so complete that their abstracts of title are accepted without question. When they guarantee their titles, as most of these companies will, they insure their clients against loss from any flaws. They have reduced the work of searching titles to a degree of accuracy that today few buyers of property or few loans are made unless the titles are first guaranteed by them.

As for the borrowing capacity of real estate, this is largely determined by its location. This relatively increases, the nearer the land is to the center of business and to transportation facilities and conversely decreases the further away its location. More money can also be borrowed when there are improvements in the form of buildings upon property, for the probabilities are that such real estate is always more readily saleable and is more likely to enhance in value as the population increases, assuring a quick sale in case it is necessary to find a buyer in a hurry. Of all property, outlying suburban real estate is the most unsatisfactory collateral, as it lacks these essential requirements.

The capital which finds its way into real estate investments is drawn from various sources, coming alike from large financial institutions, from wealthy individual investors and from the humble and thrifty masses. There is an enormous business transacted in real estate mortgages. To serve investors who are not able to buy mortgages outright, large financial institutions have evolved what is called a first mortgage real estate bond. These bonds they guarantee, both in regard to the money invested in them and the interest. This, they can safely do, as they first thoroughly appraise the value of the property on which these bonds are a mortgage, and satisfy themselves regarding the titles. In New York City there are several of these concerns which have behind them resources in excess of a hundred million dollars and in no case has there

ever been a default in the payment of principal or interest in the mortgage bonds behind which stands their guarantee. This merely serves to show how careful they are with their loans.

Their mortgage bonds are sold at a figure producing an income ranging between 4½ and 5 per cent, as they are a part of a first mortgage loan and the laws of safety and prudence exact that such loans be confined to desirable property. There has also developed, as a result of the large operations in real estate, corporations offering investors somewhat more inviting inducements for the use of their capital in extending their operations in real estate. A number of these companies have been very successful and their securities are favorably received in conservative financial circles. Their securities are known as debenture bonds. They are not first mortgage bonds, but merely notes of these corporations and of course, to make them attractive, they are placed on a 6 per cent income basis.

Some of the younger real estate and holding corporations even fix the interest on their debenture bonds at a more attractive figure, but it is well for the investor to remember that his risk increases in proportion to the more interest that is paid on his money. In normal times it is not difficult, in a large city, to raise money on real estate for anywhere from 5 per cent to 6 per cent even when it is located in the outlying sections and any higher rate should be carefully scrutinized.

As real estate debenture bonds have no other security behind them than the credit of the corporations issuing them, it is advisable to inspect carefully their financial condition. The conservatively managed companies are aware of the need to inspire confidence in their obligations if they are to find a ready market for them and to beget this confidence they make known their actual financial condition at least once a year, some of them even going beyond merely publishing a balance sheet. They employ chartered

accountants to certify to the correctness of the different items of assets and liabilities, and reliable real estate appraisers to check over their real estate holdings to assure their bondholders against the likelihood of any inflation or reckless management of the funds intrusted to their care.

It is well for the purchasers of the securities of the numerous real estate concerns, to insist not only upon a complete financial statement of their condition, but likewise upon the location of their properties. In recent years quite a number of these concerns have sprung up, some of which are by no means conducting their business along conservative lines. Their real estate holdings may be situated in the outlying suburbs, considerable distance from transportation facilities; their value may also be inflated, as there is no check upon their appraisals where no independent estimate has been made by competent real estate experts.

Some of these concerns, with an idea of inspiring confidence, have christened their securities with high-sounding titles such as, for instance, "participating bonds," "mutual profit-sharing bonds," and the like. Names do not impart security. A number of such securities, after a personal investigation, have been found as hollow as a bell.

No first mortgage real estate bond should be accepted as such unless it is so stipulated on the face of the bond and in the indenture of the mortgage. There are second and third mortgage real estate bonds, but they are graded as more speculative, as they are but a lien on the value of the equity above the first mortgage. This should suggest what care should be exercised in their selection. While some of these mortgages may be perfectly sound, in troublesome financial periods they are not the most desirable class of securities to hold, especially when they are a lien on out-of-the-way real estate.

Unless such mortgages are secured by centrally located property, with a liberal margin of value above the underlying mortgages, banks will hesitate to lend any

money on them, while savings banks are restricted by law in most states from considering such mortgages at all as collateral for loans.

Second and third mortgages are largely the creation of builders. To make it as easy as possible for buyers of homes to pay off their obligations, they undertake to carry a second mortgage payable in a year or more. It is in this way builders principally finance themselves.

I know of an instance, illustrative of how undesirable are such mortgages, where a woman in the panic of 1907 was compelled to pay a bonus of $100 to renew a second mortgage of $1,000 on a substantial home in Brooklyn. Her interest for one year, including this bonus, came to 16 per cent. This is fairly indicative of the element of risk that capital considers it assumes on such obligations.

Large office buildings, factories and apartment houses are being financed more and more with outside capital. A blanket mortgage is placed on these structures and then split up into an issue of bonds in small denominations. These bonds are then offered investors on an attractive basis. This class of business is growing in large proportions. Conservative bankers find it profitable, and the bonds, when issued within proper restrictions, are an excellent security for the medium grade investor.

Leasehold bonds are the latest form of real estate bonds. So far, they are a security largely confined to New York City, where property has become too valuable for their owners to sell it outright.

The Astor, Goelet, Rhinelander and other large New York estates owning valuable tracts of land in the heart of the city follow the system of leasing their property for a term of years, at a stipulated annual rental. The arrangement is made by the leaseholders that the improvements they make are to be turned over to the owners of the property at the expiration of the lease for an agreed sum. Leaseholds are transferable in the same manner and

form as are deeds. Bonds are also issued against these leaseholds, but for the protection of the investors, they should mature before the lease expires and there should be set aside a certain portion of the revenues each year as a sinking fund to retire the bonds when they fall due.

The outright purchase of real estate must be largely determined by location and the income it produces. No general rule can be laid down. However, it is advisable under all circumstances, before buying real estate, to make a personal investigation of the property or employ a capable, experienced and honest real estate agent to make an appraisal of its value. Where this is done, there is slight danger of making any serious mistakes.

VII. LAND AND REAL ESTATE BOOMS.

We ought not to be too hasty in deprecating, as we are often inclined, the periodical outbursts of speculation in land in this country. This is a healthful symptom of a growing nation's strong vitality, which, impatient of expanding normally, attempts to spread out with leaps and bounds.

While it may be true, that trying to forge ahead faster than our resources permit brings exhaustion as a penalty until we can again take breath to catch up with the fast pace set, the benefits of a permanent character resulting from extensive speculation in land cannot be computed. Without the speculation it is seriously to be questioned whether this country would have grown as rapidly as it has in the last fifty years and the Great West become so densely populated. There is always the strongest sort of incentive for the development of new agricultural resources behind every boom in land. The people who participate in them are made up largely of farmers who are not satisfied merely with the purchase of new farm lands to hold them for an increase in their value. They buy more to operate and make their profits out of the larger crops they expect to raise from a more prolific soil, because it has not been worked over and over again. Where, too, men flock, there follows the railroad and other conveniences which are necessary to a growing community. New towns spring up and a demand for new industries develops, which capital is always prepared to support when it sees there is a necessity for them. Considering the general benefits arising from land booms, we can, from a broad standpoint, well afford to suffer what temporary ill effects follow in their wake.

Nor is it a racial instinct peculiar to us as a people that we become occasionally obsessed with a blind belief in the possibility of making a great deal of money quickly out of land through an immediate increase in values. The same trait may be detected in the people of most of the other nations whose agricultural resources have not been fully developed.

It is true that the Pilgrims who came over in the Mayflower sought our Massachusetts shores to escape religious persecution, but those who followed them in a steady and constantly growing stream, were impelled by a wholly different reason. The letters the Pilgrims sent back home telling of the bounteous returns their farms in the new world brought forth, inspired others to tempt fortune in the larger opportunities the New World had to offer. The same was true of the Dutch who settled in New Amsterdam, now New York, and of the Cavaliers who established themselves in new homes in Virginia and other neighboring southern states skirting the Atlantic Ocean.

Aside from his occupation, the farmer is as instinctively human as are his brethren in the large cities. He wants to make money. If he can dispose of his farm at a good profit, there is a strong inclination in him to take advantage of such an opportunity. Such chances, farmers in our more densely populated states have had in plenty. In comparing the statistics with respect to the value of farm lands in the central and western states east of the Rocky Mountains, shortly after the Civil War, with those of present values, we are struck forcibly with the phenomenal enhancement that has taken place within this comparatively short period. Farms, which in the early seventies could have been had for from \$10 to \$15 an acre, are not now obtainable at less than \$100 to \$125 an acre. Even within the memory of the rising generation, startling increases in land values have taken place. The opening of the Sioux Reservation in South Dakota is a case in point.

This was barely fifteen years ago. The settlers who flocked to this reservation when the Government opened it, were able to buy the land for a trifling sum per acre. Although now cultivated, this very same land changes hands at prices varying from $60 and upward an acre, while lots in the new towns which grew up in what was then only a grazing country, which might have been had for a few dollars, have increased in value from 100 per cent to 1,000 per cent.

Thus it was also with Oklahoma and Indian Territory. When these new territories were opened for settlement, land was extremely cheap, but the pioneer farmers who located there have become rich from the soil's fertility and the rise in values.

Within the last few years, however, we have witnessed a remarkable change in land speculation. There has been a steady migration of American farmers into the new wheat belts of Canada. Those who have watched this movement estimate, and their estimate is considered conservative, that at least 300,000 American farmers have gone into Manitoba, Alberta and Saskatchewan, to establish new homes for themselves, having heard all about the possibilities of raising large crops in these lands. Rapid extension in railroad building has followed in their foot-steps to provide adequate transportation facilities for the movement of their crops.

But this migration to a neighboring country, embodies no unusual aspects. There is a good reason for it. Most of the natural arable soil in the United States has already been taken up and exploited; there remains but very little new land available, that is, adaptable to the money-making opportunities associated with new and virgin lands. What will be the result? Henceforth we are less likely to witness again such widespread land booms, such as marked so conspicuously that period of our growth between the seventies and the early nineties. The value of our arable

lands will, of course, continue to increase, but this increase will be on a more uniform and conservative scale because of the restricted opportunities.

If we are to see, from now on, any speculative operation on a large scale, more likely it will take place in irrigated lands. Here we begin to see, thus early, many of the aspects which markedly distinguished our early land booms. Irrigation, as the name distinctly defines, is artificial farming. It means bringing to arid land what it most needs to make it fertile, water. Where water has been plentiful, this form of farming has proved very profitable, in some districts crops being raised in proportions impossible on arable farm lands. The Government and private capital are working hand in hand to reclaim a great many millions of acres of arid land capable of being properly irrigated. As fast as this arid land is put in shape to be available, there will develop a growing demand for it and as a result of this demand, there will arise considerable speculation. There is now being attempted the experiment of draining swamp lands to meet the cry for more land in this country. The demand is for more land to raise the common necessities of life for a continually increasing population.

So far we have considered only broadly the beneficial effects of speculation. For guidance, though, to the individual who may regard with favor the speculative opportunities in the purchase of land, the proposition must be considered from a different and more specific viewpoint. Unless one is thoroughly familiar with the science of farming, he is apt to blunder seriously in making an investment in farm land, for not all land is always what it is represented to be. Associated with every land boom is the violent tendency to rush values upward, far ahead of the purchasing power, and in consequence there is always a great danger of buying at the crest of a speculative wave and the buyer may then find himself with property on his

hands which he may have to hold for some years before he has chance to again get rid of it at a profit. Meanwhile his investment yields no income such as capital is supposed to produce to be profitably employed. In addition he suffers a direct loss, for taxes must be paid and improvements made from time to time, all of which call for the outlay of more capital. It may even happen that he may never again see the price his land cost him. There are many localities where this has been the general experience.

With a person who buys farm land for the purpose of cultivating it, there is not this danger. He can make his property produce an income while he is holding it to resell at a profit. When buying land, whether for investment or speculation, it is always the safer course, where it is at all possible, first to visit the land and make a thorough investigation, not only with regard to its fertility, but to obtain a fair idea about the value of neighboring farm lands. Where this is done, the danger of buying at inflated values is very much lessened. If a personal inspection is not possible, the very next best step is to depend upon some one familiar with farming, and whose judgment can be depended upon for advice. But the very best thing for a person who is himself incapable of cultivating a farm, is to forego such speculative opportunities, for the risk is always the greater where one has the least knowledge about the character of the speculation dabbled in.

It is impossible to elaborate in detail on the different phases of speculation in land within the restricted space within which I am allowed to cover such a broad subject as is contained under the heading of "Investments and Speculation." I can only discuss it in the broadest light and attempt to lay down such general rules for guidance as are the most important, but I could not complete this section without touching upon the many schemes launched from time to time to interest capital in co-operative farming.

So far as I can determine, only a few such plans have

proved profitable to those who have placed their money in them. There have been plantation schemes innumerable, launched in the last few years, a great many in Mexico, some in other tropical countries. These plans appear feasible enough. The idea is to cultivate one big plantation and divide the proceeds from each harvest among the many different owners who are the certificate holders. The main trouble with most of these enterprises is that they begin with an excessive capitalization, representing more than the land can possibly be worth even many years hence. Where this is not the mistake, the chief trouble lies in inexperience in handling a plantation. Overseers are employed who know little about the climatic conditions and about raising the crops indigenous to a tropical country. One might as well transplant a native of Mexico or Yucatan to an Illinois farm and expect from him the same degree of efficiency as a farmer accustomed to the soil and methods of cultivation. Rubber plantations are also plentiful but financially they have rarely proved successful. All phases of farming seem to have defied so far all efforts to reduce it to a co-operative basis. It still remains an individual science.

Of late there has appeared a tendency to concentrate the ownership of large agricultural properties in this country into stock companies. In the Northwest there have sprung up orchard propositions in which private investors are solicited to take "units," each unit representing the ownership of either one or a given number of acres, and the proceeds from the fruits raised on the property are apportioned among the unit holders. This idea is a new one. It is yet too early to judge whether the plan can be made a permanent success, financially. So far it has been experimental. The idea, however, is being applied to other products of the soil, to oranges, to bananas and even to nuts in the South. I have even become aware recently of an ambitious plan to operate a large wheat farm in Canada

on the same lines. But I still hold that the most profitable farming is that where the owner of the land directly superintends the cultivation rather than delegates it to strangers, who cannot be expected to have the same interest in its success as the real owners.

Suburban real estate is and always will be a popular outlet for the speculative inclinations of a community, because there considerable money has been made out of such property by those who were either wise in their selections or fortunate. As a city grows in population the tendency is to spread out on adjoining lands. Considerable money is also lost in such speculations. Take, for example, New York City. As the city is constituted at present, it covers five boroughs, including Staten Island. Boomers of New York City suburban properties will so word their announcements as to convey the impression that their property is a part of the city proper, when this is far from the case. How much one may be deceived is shown by an illustration coming under my notice regarding two small suburbs on the Long Island Railroad. One of these places is 36 miles distant from the City Hall, the other but 29 miles; yet the price placed on lots in the suburbs furthest away averages about $200 a lot, whereas lots of the same area in suburbs nearest to the city and having equally good transportation facilities and requiring less time to reach, are to be had at less than $100. Here is an object lesson which requires no further discussion.

The same inflation can be found in suburban real estate outside the limits of most of our large cities. Chicago, when it had its suburban real estate boom, previous to the World's Fair, was similarly afflicted and lots bought in some of the mushroom outlying settlements have never again seen their first offering price and are likely never to see it again, as the path of the city's growth has not extended that far or has gone in different directions. Suburban real estate, or even city real estate proper, should never be

purchased on mere say-so or description. It should first be visited by the purchaser, who at the same time should spend a little time looking into property values in the neighorhood and finding out about transportation facilities. It is the last-mentioned which makes the property and lays the foundation for an increase in its value. The people who live in the suburbs do so for economical reasons. They can build their homes and maintain them cheaper than in the city itself. But they must have quick transit facilities to and from their occupations. Along the principal avenue of the movements of this element of the population, real estate will always prove profitable speculation. The science lies in finding where that is and then getting property on a reasonable basis of value.

VIII. THE MULTIPLICITY AND COMPLEXITY OF BONDS.

It is only possible to form a clear conception of the many different types of securities marked as bonds on the shelves of investment dealers when they are grouped one after the other in their order of importance and marshalled before the mental vision. We may then gain a fair idea, not alone of their variety, but of their multiplicity, and from that realize how their complex character can confuse investors unless they are thoroughly posted in this line of investments.

There are first mortgage bonds, second mortgage bonds, third mortgage bonds and, on some of our large railroad systems, even fourth mortgage bonds, each, in its turn, being secured by a lien on the property of the railroad in the sequence of its issue. To make it plain, it is best to describe in the beginning what is meant by a mortgage bond. In character it is not different from a mortgage on a parcel of real estate, except in the respect that a real estate mortgage is usually owned by one individual, whereas there are hundreds and often thousands of investors interested in the same mortgage issued by a railroad or some other large corporation on its property. The way this is brought about is as follows: First, a mortgage for the amount of the loan is properly drawn up and recorded; then, in turn, it is registered with some trust company which acts as a trustee. Bonds are issued in certain denominations against the mortgage. The denominations are usually in amounts of $500, $1,000 or $5,000. However, there is nothing to prevent their being in $10,000 or $20,000 or even for as small a figure as $100, as this is a matter largely left to the discretion of those bankers who arrange the bond issue. Cus-

tom, however, with us, has largely favored \$500 or \$1,000 bonds. To more widely distribute bonds among smaller investors, bonds of \$100 denomination have lately been increasing in popularity.

Each bond represents a direct interest in the mortgage for exactly the denomination it calls for; that is to say, the borrower has pledged certain collateral to guarantee the payment of the bond upon the expiration of a given period of time, together with a fixed per cent of interest each year, payable on demand, either annually, semi-annually or quarterly.

The difficulty of borrowing considerable money from one or a few individuals in large transactions can be readily appreciated. Thus, to facilitate borrowing by large enterprises, modern finance has evolved the scheme of splitting up the loan in so many integral parts, each part constituting a bond. The Pennsylvania Railroad, for example, has outstanding against its main line, a first mortgage of \$100,000,000. Now it is not possible to raise such a large sum from one individual; therefore it is obtained through many, by the means of bonds, as has already been described. There is one trustee, usually a responsible trust company, with whom the mortgage is lodged. It is the mission of this trustee to safeguard the holders of the bonds by carefully scrutinizing the indentures of the mortgage to ascertain and satisfy itself of their legality, and furthermore that the collateral described as securing the mortgage is all safely pledged and that there are no flaws. The same trust company, or it can be another, acts as the registrar for the bonds. Its duty is to exercise proper supervision that not more bonds than the amount called for by the mortgage are issued. The bankers who have taken the bonds, pay to the trust company, the price agreed upon and have the bonds authenticated by the registrars, each bond being stamped, or there is engraved upon it the statement that it is a certain fraction of a number of fractions, the whole

together representing the amount of the mortgage. This is to prevent an over-issue. The full terms of the mortgage are seldom engraved upon a bond. They are usually printed separately in the shape of a pamphlet; the actual mortgage is filed with the trustee. The printed copies are for the purpose of distribution among investors.

Attached to the bonds are small coupons. If the interest on a twenty-year bond is made payable semi-annually on the first day of January and July and is at the rate of 5 per cent per annum, there is appended to each $1,000 bond, 40 separate coupons, each stipulating that there will be paid on a given date, at a certain agreed-upon place, the sum of $25, in gold usually. In a similar manner will the principal of the bond be paid when the date of maturity is reached. All that is required of the holder of the bond is to clip off these coupons as they fall due and deposit them with his bank for collection, or he can present them in person, or request that payment be made by sending in the coupons. To make it as convenient as possible for bondholders, these bonds may be registered with the corporations issuing them; that is, the bonds can be left in their custody, with the name and address of the person to whom checks for the interest and principal should be mailed. Most bonds are made out to the bearer. This is done to make possible their speedy sale and transfer. Therefore, in case they are lost or stolen and fall into a third or innocent person's possession, the loss will fall upon the original owner. To safeguard against such an event, timid investors and trustees of estates quite often register their bonds, even though they are aware that their securities, lacking the advantages of a quick transfer, may realize, if sold, a fraction less on account of the delay in delivery, as the bonds must first be released on the corporation's books. As the interest on the bonds falls due, it is deposited with the bank where it is paid, and disbursed as the coupons are presented.

While it might seem, in dealing in large amounts, that there must necessarily be some confusion, this mechanism devised by modern finance in handling large loans is very simple in its operations.

The confusion regarding bonds, consequently, is not in their method of issuance or in their manner of payment. It is in determining the collateral securing them that counts. Here is where the investor must exercise precaution. Often his power of judgment must be developed to a very high degree. Essentially one factor must be determined by bondholders for their protection, and it concerns itself wholly with the equity existing behind the loan.

In the process of making the simplest loan, no one will, for one moment, think of accepting for security, any pledge which, in the event a borrower cannot meet his obligation will not, if sold, realize at once the face of the loan, together with all accumulated interest and all the expense caused by the legal enforcement of its payment. It is necessary, as a precautionary measure to be fortified against all possible loss, in the event of a default on the part of the borrower, whether it is for interest or the payment of the principal, to exact a certain marketable value in excess of the loan. This is what is referred to in financial circles as the equity.

By the same yard-stick, investors should measure bonds, since the smaller the equity the more speculative in character is a bond and in turn a better income should it yield for the larger risk the holder must assume. Bondholders are creditors of a corporation. They are unlike stockholders, who divide what profits are made. They merely lend their capital in return for a fixed interest, and ought, by the very nature of their position as creditors, to be amply secured against any and all stressful business weather a corporation may meet. For that very reason the collateral pledged behind bonds ought at all times to be subjected to the most exacting investigation.

As has been previously stated, there are first, second, third and even fourth mortgage bonds, back of which there is pledged the same property. The first mortgage bond, quite naturally, is the prime investment, yet from a point of security, this does not always indicate that second, third or even fourth mortgage bonds are not also safe investments. These different degrees of direct mortgage bonds are most frequently found issued by our large railroads. This is due to the fact that the property underlying the first mortgage bonds has multiplied in value so fast as to have accumulated an equity sufficiently large enough to allow in perfect safety the creation of second and subsequent mortgage bonds.

The Erie Railroad is an illustration. This immense railroad system has issued as many as five first mortgage bonds against the same property, namely: The first, 4 per cent bonds, which matured in 1907; the second, 5 per cent bonds due in 1919; the third, 4½ per cent bonds due 1923; the fourth, 5 per cent bonds due 1929; and the fifth, 4 per cent bonds due 1928. In citing the Erie Railroad as an illustration, I do not want it understood that I use it as expressing my opinion that these several first mortgage bonds are examples of the safest type of investments. Other railroads have not been as explicit in properly cataloging their bond issues as has the Erie, and this has resulted in much confusion to the average investor, who, as he reads of a first mortgage bond, is most likely to assume without further inquiry that it is as described literally, a first mortgage without any incumbrance ahead of it. However, such is not always the case. Upon reading the description of the bond more closely, the investor is likely to run across something like the following which is the exact phrasing taken from a well-known first mortgage railroad bond:

The authorized issue of first mortgage 5 per cent bonds is $3,000,000, the unissued $120,000 being reserved for the retirement of the........bridge bonds.

Analyze the above paragraph carefully and its mean-

ing will become clear. These bonds, although called first mortgage bonds, are not exactly that. There is a security ahead of them in these bridge bonds which must first be satisfied. Without the bridge, the railroad would be cut in two parts like a dismembered body.

Here again is another description of a first mortgage bond which will cast further light on this important point and concerns a first mortgage 6 per cent railroad bond.

Amount authorized is $6,000,000; issued $2,788,000, of which $1,288,000 was in exchange for prior lien bonds.

To be exact, what this means is that there are ahead of the first mortgage 6 per cent bonds, other bonds already in existence and issued against a mortgage for $1,288,000 and out of the new $6,000,000 first mortgage bonds, enough bonds have been reserved in the treasury to replace the already existing bonds when they fall due.

No bonds can be called for payment unless there is such a stipulation. Our early railroad builders never expected to witness such a rapid expansion in value in their properties as occurred in their lifetime, for, otherwise, they would have made some provision to cancel their first mortgage bonds earlier than the full term of the loan so as to leave their path clear of obstructions to raise additional money as the growth of their railroads required it.

Only a few years ago some of the Chicago & North-Western first mortgage 7 per cent bonds matured. This premier railroad system created these bonds when the West was still young, and at a time when it was not as easy to borrow money as now, and the builders of this great system, not to burden it for a long term of years with repayment of the money for its construction, imagined they were driving a shrewd financial bargain when they made these bonds payable in forty and fifty years. But they seriously erred. Long before these bonds reached their date of maturity, the Chicago & North-Western was able to borrow whatever money was required to finance all im-

provements and extensions with bonds bearing even as low an interest rate as 3½ per cent, and what would have been even a greater revelation to the founders of this property, had they lived, would have been the fact that these low interest-bearing bonds brought par, whereas in their day, to make their 7 per cent bonds attractive, they were forced to offer them at a considerable discount.

This hard lesson of our earlier financing of our railroads has never since been neglected. Now, when a railroad or any corporation pledges any of its property as security for a bond issue and anticipates in the course of time that the property will enhance greatly in value or the opportunity may arise to borrow money more cheaply, it provides for such eventualities by stipulating in the mortgage the privilege of calling in the bonds for payment, on any given interest date, usually at a premium of from 5 to 10 per cent. We often come across the term in a bond callable on any interest day on so many weeks' previous notice at a certain price with accrued interest, accrued meaning the interest due for the period between the last date when interest has been paid to the date when payment in full for the bonds is to be made.

A reduction of ½ per cent in interest on a large amount of money represents a tidy annual sum saved. Shrewd financiers fully realize this. Because of their increased credit and value of their property, a good many of our railroads could, in the course of years, have effected the saving of many millions of dollars by a cheaper rate of interest, had they been in the position to call their early bonds issued at a high rate of interest. They had to allow them to run out their term of issue.

What a multiplicity of all sorts and types of bonds there is now in existence may be judged from a partial list here compiled. There are government bonds, state and municipal, under which latter term there is a varied assortment, such as direct obligations of the city, tax, drain-

age, pavement, road, highway, improvement, lighting, gas, water, assessment, boulevard, etc.; there are the first mortgage railroad and corporation bonds already described, and mortgage bonds following in sequence in regard to security; there are consolidated, extension, income, refunding, general, construction, terminal, improvement, divisional, equipment, convertible, collateral, lien, series, guaranteed, coal, timber, bridge, tunnel, vessel, debenture, participating, purchased line, unified, branch line, joint, stamped, adjustable, land grant, canal, loan, underlying, redeemable, reorganization, tax exempt, purchase money, sinking fund, convertible debenture, and real estate bonds and many other kinds. Besides these there are trust receipt certificates and short term notes.

When the investor arrays all these bonds before his mental vision, he will understand the full meaning of the multiplicity and complexity of bonds, which has resulted from the swift evolution in our modern finance. He will appreciate that a trained mind is necessary to judge the intrinsic value there is behind all these different names given to bonds in this modern day, and he will also realize how a clever financier, under the guise of a bond, can dispose of a security which in all reality is no more a bond, in the true sense of the term, than is the paper on which this is printed.

IX. GOVERNMENT, STATE AND MUNICIPAL BONDS.

Bonds issued by governments, states and municipalities are in a distinct class of their own. The vast majority of these securities have no other pledge behind them than the credit of the nation or the community issuing them. Still they are looked upon as very desirable investments when representing the obligations of a prosperous people. There are some circumstances, however, under which bonds of this type are not attractive to the individual investor, from a viewpoint of income.

Take our own government bonds, for example. The great bulk of them are owned by our national banks and only a small proportion by investors, considering the many millions of them that have been issued. If they are held at all by investors or estates, it is not because of the interest yield, but on account of the assurance of their absolute safety.

Our national bank act makes it compulsory with a national bank, before it can issue any bank notes, to deposit with the United States Treasurer, an equivalent amount of government bonds to secure the payment of these notes. You have no doubt often noticed a paper bank note on the face of which was engraved the name of a national bank and signed by the bank's president and cashier. Well, it is these notes which are thus secured by the deposit of government bonds. Insolvency may overtake the bank, but the notes are always secured by government bonds deposited in the United States Treasury. When a bank wishes to reduce its outstanding bank notes, all it does is to collect a sufficient number of national bank notes and tender them to the Treasurer of the United States, upon which

the equivalent amount in bonds is released. It is not necessary to tender the notes of the tendering bank; any other bank notes are equally acceptable. This is done to facilitate their issuance and cancellation.

As a result of this national banking act, there has arisen a broad market and a constant demand for our government bonds, a demand created by an artificial market which has made it possible for our Government to raise all the money it needs to provide for its fiscal requirements on a 2 per cent and 3 per cent basis and still place its securities at a premium. The national banks find it profitable to pay this premium, for they secure a small income on the bonds after paying the tax and, with the notes they can issue, earn additional interest by lending this money out to customers. Without entering into the details of this operation, in which investors are not interested, it can be readily seen why it is with the many national banks in existence that our nation's bonds bring such high prices, notwithstanding they bear a low rate of interest.

In England, the government bonds are known as consols. This name was derived from an act of the British Parliament consolidating the public debt and the word is an abbreviation of consolidated. English consols, until recently, commanded a price realizing slightly over 2 per cent, but they have steadily fallen, since there has not been the artificial market for them as is the case in the United States with its national debt bonds. The banking system in Great Britain is also differently organized. There the note-issuing power is concentrated in a central bank, the Bank of England. For a time, however, English consols were under an artificial stimulus through the adoption of a postal bank system which, by enactment of Parliament, could only invest deposits in British consols. As deposits fall off, so does the market, for the Government's securities narrow, at least, the artificial market provided by law. Still, even with the decline which has occurred and which

at one time brought the price down below a figure not witnessed since 1848, consols still yield less than 3 per cent, indicating that the staid British investor values very highly the credit of his nation and is perfectly content with an income ranging between 2½ and 3 per cent.

In like manner does the French peasant investor appreciate the Government Rentes, as the French Government securities are called; the German, his government obligation; and equally so the people of other prosperous nations favor their own national securities. However, not all governments can borrow money on their credit as cheaply as the stronger powers. Credit with them varies, as it does with individuals. Some of the smaller nations are forced to pay as high as 6 per cent for loans and besides they not infrequently allow the underwriting bankers who take the loan and agree to place the bonds, a discount for their services. Some of the minor countries, where there is turbulence and internal strife constantly, cannot even borrow money unless at usurious rate of interest, because they have no stability to offer as a reassurance that their loans will not be repudiated.

It cost Japan almost 6 per cent on its loans to finance its war with Russia. The Cuban Government had to pay the same rate. Even Russia, although known to have collected the largest reserve in gold owned by any European power, found it necessary, when in conflict with Japan, to tempt bankers and investors with a high interest rate before they would take its securities. The bonds issued by the governments of the Argentine Republic, Brazil, Chile, Bolivia, Honduras and other South American Republics can be had on a basis close to 6 per cent. This does not at all reflect upon them; it merely fixes the position of their credit in the money capitals of the world. As their credit enhances they will be in a position to refund their outstanding loans on a lower interest basis. Mexico did this a short time ago. That country placed a gold loan some

years ago on a $4\frac{1}{2}$ per cent interest basis. The country's credit has increased to a point where it was found possible to replace these $4\frac{1}{2}$ per cent bonds with a 4 per cent bond, thus effecting quite a saving in fixed charges to the Government.

The interest government obligations call for is usually provided by the proceeds from taxation, external or internal. Some countries place a tax on certain widely used commodities and set the revenue aside for the payment of interest on the public debt. In no other way, except in isolated instances, are government bonds secured. Should a government debt be repudiated, its payment by the holders of its obligations could not be enforced by recourse to law. The reason is that a government cannot be sued, since it is not amenable to the statutes of any other government, while its own people cannot recover from the institution they themselves have created and whose laws to govern them they have enacted.

In our own country the freedom of the Government from any civil action even goes so far as to exempt the states. South Carolina repudiated some of the bonds issued during the reconstruction days and neither the interest nor the principal has ever been paid. Nor can the holders enforce payment. Some of the bondholders have attempted, and so far have succeeded, in getting a number of these bonds in the possession of another state, because one state can bring legal action against another to recover on a disputed claim. South Dakota did sue South Carolina in the United States Supreme Court to enforce the payment of these bonds and recovered judgment, but even then a state cannot collect, as it cannot attach the property or revenues of another state and certainly cannot take up arms against it to make it pay. In the end such matters must be left to the honor of a state for settlement. Fortunately, with our country, instances of repudiation of public debts are very rare. Only in isolated cases has it ever occurred.

The means the Government adopts to raise money are followed on a smaller scale by the forty-eight separate states. They have uses for funds likewise. Improvements in the highways are a constant necessity. There are the public buildings to provide for. The needs of other improvements benefiting the people of the state are constantly arising. To provide the funds by direct taxation would prove to be too burdensome and also is it unjust to force one generation to share the whole burden of financing some public undertaking, the advantage of which will be participated in by generations to come. The theory is, and it is a very good theory, that such debts should be divided equally and this is accomplished by issuing bonds running for a long term of years and carrying a fixed rate of interest. As these bonds are authorized, the state, usually through its elective officer, the State Treasurer, invites bids for them and disposes of the bonds to the highest bidders.

The privilege of bidding for such bonds is not restricted. The humblest investor can make an offer and if it is among the successful tenders when the bonds are allotted to the highest bidders, he will obtain the bonds to the amount of his bid if there are enough to go around. There is one restriction, though, which has been adopted as a general practice to guarantee that the bonds will be taken by the successful bidders or bidder, and this is that a certified check for a nominal per cent must accompany the bids as a guarantee of good faith.

How unjust it would be to have one generation carry the entire burden of an important public improvement, can best be illustrated by the improvement and electrification of that great highway of commerce, the Erie Canal, by the State of New York. It is estimated that this work will cost about $100,000,000 and to provide the funds, the legislature, a short time ago, authorized a state bond issue to the amount authorized as the work progresses. Posterity will derive greater benefit from this vast undertaking than

will the present generation. Some states whose credit is excellent, fix by statute the interest rate and even the price which must be realized for whatever bonds the legislature authorizes. But this is not always an advantage. Capital may not be so available as to be attracted by a low rate of interest, and if this is true, we witness the failure of a bond issue, because there are not sufficient bids for it. This has even happened with New York State, rich as it is. The state, in normal periods, experiences no difficulty in getting all the money for its requirements with a 3 per cent bond. Furthermore, bankers and investors bid eagerly for the bonds at a premium over the price fixed by law, at which they may be sold. But during the depression following the 1907 panic, there was a time when the State Treasurer was compelled, because of the failure of bids, to come within the state law's requirements to purchase an issue of bonds with the available cash in the state's sinking funds. The line of demarcation in credit is as pronounced with states as it is in individuals. The far western and sparsely settled states are forced to pay larger interest to tempt capital. Thus you see that capital is a ruler whose power is supreme.

Counties, large cities and small municipalities borrow money on much the same lines of financing as are followed by the states and general government. Here and there various restrictions exist but in general they follow the same plan of raising funds. To prevent the cities from overborrowing, some states, and for that matter most of them, have wisely fixed a limit. For example, no city in the majority of eastern states can legally authorize more bonds than will equal 10 per cent of the assessed valuation of the taxable property, and when it has reached this figure, it must wait until there has been an increase in the value of the assessable properties to permit adding to the public debt. This is a wise provision, as it acts as a safeguard against creating an indebtedness beyond the ability of the

population to comfortably carry. Such ~~lands~~ bonds are also disposed of by inviting public bids, which bids, by law, must be advertised. To give a distinct identity to these bonds, they are usually named after the purpose for which they are issued.

A city may decide on making some street improvements; therefore bonds are authorized for this purpose and designated as street improvement bonds or they may be courthouse or school bonds, highway bonds, grading bonds, etc. Therefore the character of a county, city or a municipal bond may be determined by the name employed to distinguish it from other bonds authorized by the same community. My space is too limited to go into all the details governing the many thousands of such obligations which have come into existence. I can only refer to them generally and in the broadest light. For instance, New York City has a public debt in excess of $800,000,000, all of which is represented by a great many classes of designated bonds. New York City is a steady borrower. It needs money for docks, for subways, for boulevards and many other manifold forms of public improvements. Some of these bonds earn their own interest charges; for that reason they are not a burden on the taxpayers. This is the case with the bonds authorized to raise the money to build the subway or furnish underground rapid transit facilities. Likewise with the bonds issued to build the large water front piers owned by the city and rented to the steamship lines. The interest on other bonds is provided by taxation of the property owners who are the direct beneficiaries of the improvements.

It must be anticipated that where there is such a multitude of communities, small and large, there will arise many complications in determining the character of their securities as investments. As a result, also, there will be a wide range in their income yield. The business done in such obligations reaches enormous totals. It would prove

highly interesting if it were possible to describe in one section a subject which could only be adequately dealt with in a whole book—the care that must be exercised by bankers who make a specialty of dealing in municipal obligations. Before bidding for these bonds, such houses, through their attorneys, first assure themselves that the bonds have been legally issued, by which is meant that the electors authorizing the bonds were within the law. They must, in instances where even the legality of the issue is not in doubt, satisfy themselves that the community can meet the taxation to pay for the issue. Infrequently this is the case: A growing settlement, in its ambition to anticipate the future too far ahead, may rashly bite off more than it can masticate, and as a result, complications arise. Dealers in municipal bonds wish to avoid this possible danger even when it is a remote contingency. Money is a hard taskmaster. It has no sympathies. However, considering the total obligations of the multitude of our United States communities, estimated in the neighborhood of $10,000,000,000, they have had such an unusually satisfactory record as safe investments that investors need no other reassurance from the bankers than that their legality is beyond question and the amount of the issue is within reasonable bounds.

X. THE AMAZING VARIETY OF RAILROAD BONDS.

In the issuance of bonds, our railroads have been very prolific. Not only are they possessed of an insatiable appetite for continuous supplies of new capital, sometimes for the logical purpose to provide for legitimate needs, and on other occasions to satisfy the desire for new worlds to conquer, but, to give their bonds suitable names, the makers have almost exhausted the financial vocabulary.

The average investor, unless thoroughly acquainted with the difference in bonds, will nowadays need a financial text-book to distinguish one railroad bond from another, and even then he may not be in a position to judge their relative and intrinsic values. There are so many different bonds as to recall the 57 different varieties of pickles made commercially famous by a certain purveyor of condiments. While there are not exactly that many different kinds of bonds, the total is dangerously near the number.

Still the railroads are not wholly to blame for this situation. As has been pointed out in a previous section, the early builders of our railroads never, for one moment, thought their properties would ever grow with the giant strides that have characterized their progress. Early in their history, by erring on the side of conservatism, in pledging all their assets as collateral for loans, which is all bonds really represent, they made it impossible in after-years to directly mortgage their properties over again. Thus they were compelled to resort to other devices when it became necessary to borrow more money, and this accounts for the many varieties of bonds they have created.

The earliest railroad bond was the first mortgage bond. Down to this day it is the leader among the best of bonds,

a fact that is firmly established by the relatively small income it yields, compared to other bonds issued by the same railroad. As they possess the first legal rights to the assets of the road in the event of financial embarrassment, the security is usually accepted as an absolute guarantee of the safety of the funds invested.

Of course, this does not apply to all first mortgage railroad bonds—only to the old-established properties. Again, a first mortgage railroad bond does not necessarily mean that it is the first lien on all the property. The mortgage may be on only such property pledged under the mortgage as is especially drawn to cover that particular issue of bonds. A large trunk line may have outstanding a dozen or more first mortgage bonds, each bond covering a part of the main line, and not infrequently, branch lines.

Our great railroad systems are not the result of the original plans of their first builders; these men may have had a nebulous idea, at the beginning of their project, of a system from coast to coast, or covering a certain section of the country under their control with a gridiron of rails, but, realizing all this would take time, they contented themselves with building their road in sections, allowing the future to take care of the logical development of their property.

While Henry Villard planned the Northern Pacific, other brains completed it. Harriman merely completed the unfinished Union Pacific. He simply moulded his great Pacific railroads out of what remained of the bankrupt Central Pacific, the construction of which the Government aided by large subsidies. James J. Hill never had any idea, when, for a small sum of money, he secured control of a jerkwater Minnesota railroad, that eventually it would develop into that marvelously rich transcontinental railroad —the Great Northern of today.

It is by a process of evolution that a railroad's capital obligations grow. The one keeps pace with the other.

Twenty years ago it never entered the head of the audacious and far-sighted Cassatt, the President of the Pennsylvania Railroad, at the time when the road determined to build a terminus in New York City, that the Long Island Railroad would one day become absolutely necessary for its expansion, as has since proved the case, for the control of the Long Island has given the Pennsylvania a commanding position over the greater part of the profitable suburban traffic originating out of New York City—a business which alone is regarded as capable of taking care, without depending upon the other revenues, of the Pennsylvania's huge investment of over $100,000,000, which the road spent to secure a foothold in New York City.

If the histories of our other leading railroads were carefully searched, similar conditions would be found where the roads have expanded in entirely different directions from that planned by their original builders. Their remarkable and rapid development has brought with it quite naturally some very unusual phases of financing. The main lines of all the principal railroads, through the enormous development of their traffic, long ago quickly outgrew the funds raised on their first mortgage bonds. Then arose the necessity of providing additional capital to take care of the increased business through some other form of bond against the very same property, although there already existed liens upon it. But as there was sufficient equity above the mortgage, this step was justified.

A clear idea regarding the several classes of bonds outstanding can be more easily formed by classifying them and giving a brief description of each. It should be borne in mind, however, that these definitions are not specific, but apply only generally to each class. There are so many peculiar features associated with railroad bonds that it would be impossible to treat specifically of each issue unless the bonds of each railroad were described. Such a task would require a book more than twice the size of this

volume. For that reason the description I shall give of each, I feel will at least suffice to fix its character in the reader's mind.

The *consolidated bond* is a bond wherein is merged a number of bonds previously issued. A railroad may have created in former years a series of bonds directly secured by its physical assets. Some of those bonds may have been placed when interest rates were high, while the other bonds were sold in later years at a time when it was much easier to borrow capital than at the earlier period. The railroads, to escape this situation, evolved what is known as the consolidated bond. This was done through the making of a general, or what is styled, a blanket mortgage, providing that amounts of such consolidated bonds be retained by the road to equal the bonds already outstanding on the property, so as to replace them when they fall due. In this manner the railroads were in a position to obtain additional funds without pledging additional collateral.

Almost similar in character are *refunding bonds.* Originally, they sprang into existence as a means whereby the railroads could refund high interest-bearing bonds which, when the road was first building, it was necessary to sell to tempt capital into the project. It was the practice in the early days of railroad building to make a loan for fifty years. Usually the interest paid was 6 per cent; sometimes it was as high as 7 per cent. What was further to the detriment of these early loans, was that no callable provisions were embodied in the mortgage; therefore these bonds had to run until their expiration. Almost fifty years covers the longest period of development in our steam railroads. Fifty years takes us back to the very beginning of our Civil War, a period when the construction of railroads was still in its early stages. In consequence there has matured and will mature, within the next decade, a number of these early issues of railroad

bonds. It is to take up these bonds as fast as they mature, and to secure additional capital as found necessary, that refunding bonds bearing a lower rate of interest have been and are being issued.

The so-called *general mortgage bond* may or may not have other bonds ahead of it, but more often it will be found that such is the case. The purpose behind such a bond issue is to have some day, when all prior lien and branch line bonds have matured, but one kind of bond outstanding. These bonds are also issued in large amounts to provide a railroad's treasury with a reserve fund in securities on which to depend for additions and extensions as future development may demand.

As its name implies, an *extension bond* is a bond created for the purpose of raising funds to extend the railroad. Usually the extension is pledged to secure the bonds. Such bonds may be named first mortgage extension bonds, or merely extension bonds. A *divisional bond* is almost exactly the same, it being an obligation of a division on a railroad distinct from the rest of the system, likewise a *branch line bond.* There are many such bonds in existence.

Among the bonds of some of our railroads will be discovered what are called *unified bonds*, meaning a bond created to unify in one issue a number of underlying bonds and to reduce the interest, which differs on the several issues, into one rate. Other railroads will call a bond similar in purpose an *adjustable bond,* implying that with the issue the intention has been to adjust the bonded debt into one class and have one given interest rate.

A *lien bond* denotes the obligation in accordance with its number or name, as, for example, a *first lien* bond is really the direct mortgage bond, although some railroads call this particular issue a *prior lien*, implying it has preferences over all other liens or bonds outstanding. A *second lien* bond is like a second mortgage. A *third lien* follows in sequence and so forth. Quite naturally it may be assumed

that each lien bond on the same collateral has behind it a lesser degree of security than the lien ahead of it.

Often a railroad plans improvements on a certain section of the road already covered by a mortgage, and raises the capital by selling what is known as an *improvement bond*—a bond presumably secured by the improvements contemplated, although in reality subject to bonds already in existence, inasmuch as the improvements can have little value if detached from the underlying structure.

The railroads likewise have found it convenient, when they wish to expand, to acquire other roads. This is often a much cheaper method than to construct a new line in the same territory. This has brought into existence what are called *purchase line bonds,* the proceeds of which enable the railroad to secure control of a rival of a feeder. These bonds usually are a lien on the acquired road, subject sometimes to bonds that may be already pledged against it. There is also the *construction bond,* a security issued for capital to undertake new construction. There is the *purchase money bond,* akin to the purchase line bond, only a little broader in scope in that it may mean that the money can be used to purchase something else than another road. There is the *tax exempt bond,* so named because it is free from taxation by state or city, not through any legislative provision, but by the mere fact that the railroad itself has agreed in its mortgage to take care of all the taxes, or it may, by legislation, be freed from all taxes in certain states. Here it might be mentioned that in some states, in order to increase the number of desirable securities into which the funds of its savings banks may be safely invested, tax-free provisions are held out and also provisions whereby certain types of bonds become legal for investment for the funds of such institutions. This explains the phrase so frequently occurring in the circulars of bond dealers: "legal investments in such and such states." *Serial bonds* are like lien bonds, as, for example, the Chicago, Milwaukee & St. Paul

general mortgage bonds. The total issue is $39,978, 000, and of these bonds a little over $31,000,000 comprise the Series A bonds and the remainder are the Series B bonds. A railroad finds it sometimes convenient to split a large bond issue into different series and name the several issues in this manner to give them a distinct identity and maturity.

The *terminal bond* is usually secured by the main station property owned by a road. This property, consisting of valuable real estate, is at least now-a-days kept distinct from all other assets and used as a collateral to secure separate loans. This idea is further applied to other property owned by a railroad, not directly associated with its main business, as in the case of the road's harbor or water business. A number of our roads, for the development of this traffic, have raised money for the purchase of ferry boats, lighters, vessels, and tug boats, all of which it pledges for a separate loan, and each bond is specified under a separate name so as to easily distinguish it. Similar is the case with *bridge bonds*, directly secured by certain bridges a road has built to span certain streams. *Tunnel bonds* are issued for the same purpose.

By a *joint bond* it is usually inferred that the bond is jointly associated with some other bond in a particular lien. An *underlying bond* is named thus to distinguish it from another bond on the same property. A *redeemable bond* implies that the issuing company reserves the privilege of calling upon the holder for the return of the bond, with accrued interest, at a specified price. There are also issued by the railroads, *canal bonds, timber bonds, coal bonds, land grant bonds* and so forth, each issued against particular property, and in many instances they are valuable. Take, for instance, the Reading, the Lackawanna, the Delaware & Hudson, the Jersey Central and the Lehigh Valley; their coal properties are among the most valuable of their entire assets, as on the other hand are the land grants of the Southern Pacific, the Union Pa-

cific and the Canadian Pacific. The land, originally granted these roads by their respective governments to encourage their development, has increased enormously in value through the transportation facilities which have been accorded them, and through the influx of population.

There is also what is styled a *reorganization bond,* an obligation issued at the time when a financially embarrassed railroad was reorganized and again put on its feet. There is the *stamped bond,* stamped for some reason or other. This is a rare bond, the Atchison being one of the very few railroads having a bond of this description. Then there is the *registered bond,* taking its name from the privilege accorded the holder to register his name and address and the amount of his bonds on the books of a railroad as a protection against loss or theft of his bonds. When this is done the bonds can only pass from one holder to another by a transfer on the books, for bonds to be quickly negotiable, are made out simply to bearer.

Sinking fund bonds derive the name from a provision that the issuing company agrees to redeem each year a specified number until they are all automatically retired. Sometimes a railroad carries the redeemed bonds in its own treasury, using the coupons to help pay the interest on the outstanding bonds, or it may agree in the mortgage to set aside each year a certain per cent of the earnings as a sinking fund to automatically retire the bonds when due, the interest on this money helping to defray the interest on the bonds.

There are also *guaranteed railroad bonds,* consisting of bonds of controlled, leased or absorbed lines, whose bonds are guaranteed by the controlling lines. Sometimes these bonds are guaranteed, both as to interest and principal, meaning that if there is a default, the guarantor will reimburse the holders in full. Some of these bonds are guaranteed only as to interest, as in the case of the bonds of the Western Pacific, the interest on the first mortgage 5 per

cent bonds being guaranteed by the Denver & Rio Grande, but not the principal.

A class of railroad bond which in late years has jumped into great popularity, is the *equipment bond*. Nearly every railroad has one or more such issues, some of the larger roads having many. These bonds are secured by the rolling stock consisting of locomotives, passenger coaches and freight cars. It can easily be inferred what constitutes their safety in the opinion of investors when it is taken into account that without equipment a railroad is useless and its tracks would soon consist of two streaks of rust.

Railroads have gone into receivers' hands, suspending payment of interest on a portion, if not all of their bonds until they could be refinanced, but rarely have even receivers avoided paying promptly the interest on equipment bonds, realizing the absolute necessity of retaining the equipment. Being easily moveable, this equipment gives the bondholders a conveniently saleable collateral in the event they would have to take it over to satisfy their loan, and then it would not be possible to operate the road unless other equipment was purchased.

XI. PUBLIC SERVICE BONDS.

There is a class of corporations owing their existence to special privileges granted by communities to furnish a service to the people, providing greater comforts and making inter-communication more convenient. Such corporations are known as public utility or public service companies, and comprise those engaged in supplying transportation facilities, gas, electric light, heat, water and power. In only one respect are these corporations analogous to corporations in another field, and that is in regard to transportation. In all other respects these corporations belong distinctly to an individual class. The street car lines provide a convenient service to a congested community in traveling cheaply and quickly from one place to another. They supply in a smaller sense the service the steam railroads give in covering greater distances.

But only in recent years have public service corporations come to occupy their present position of prominence and importance as a field for the profitable exploitation of capital. It might also be stated that the golden age, if there can be said to be such in the history of corporations, came to them with the advent of electricity, that subtle force which introduced an economic revolution in low operating cost. In the days antidating steam and electricity, when horse cars were the mode of transportation, the service was so slow there was little profit in the business and next to nothing if the capitalization was large. Nor was there much improvement with the change from horse cars to cars propelled by cable. While it was a step forward to haul cars in trains of two or more coupled to a cable car, the coal required to provide the power to run the cable, ate up almost all that was saved by dis-

pensing with horse power. Likewise breakdowns occurred so frequently with cable power as to make that an expensive item in the operating cost. All these disadvantages, however, were finally overcome with the advent of the first electric trolley car. The cost of producing power by electricity was reduced to a minimum. It made possible transportation facilities to serve remote sections of large cities. It gave to the smallest towns a street car service—a direct stimulus to growth. But what may be regarded as the most phenomenal development has been the upbuilding of interurban traffic, which is today making electrical roads keen and aggressive competitors of the steam roads. All this is possible because it costs less to operate the lines and the service is maintained at low cost and is more efficient.

In what strong position electric interurban transportation is entrenched in this country will be readily appreciated when it is known that it is possible now to start in a trolley car, for instance from New York City, and almost cross the whole state. There are breaks in the lines in only one or two places which are not yet bridged by connecting electric roads. The interurban practically parallels the New York Central Railroad all the way from New York to Buffalo. In fact they have become such keen aggressors for the short haul business, which, by the way, is the most profitable traffic, as to compel the big railroads in self defense to absorb the principal electric interurban lines in order to maintain their dominating position. The New York, New Haven & Hartford was actually forced to take under its wing, through a separate corporation, the interurban lines touching every place of importance in Connecticut and Massachusetts, or face the penalty of heavy inroads upon its passenger and light freight business. The management of the Southern Pacific, seeing far ahead the possible encroachment the electric roads in Southern California might make upon its earnings, did not wait until this stage was reached, but secured control of all the important lines at

the first opportunity presenting itself. Today a traveler can, by means of these long-distance trolley lines, reach almost every part of Ohio. In Indiana, similar conditions prevail, as also in the larger portions of Illinois and Pennsylvania.

Nowadays a person may obtain a berth in a trolley sleeper car in the evening at Dayton, Ohio, and be in Indianapolis early the next morning. He may travel in similar comfort from Peoria to St. Louis over the Illinois Traction lines. All this but gives a faint idea of the remarkable evolution electric power has brought about in transportation. There are prophets, whose claims are by no means disbelieved, who say that it will not be long before the monster engines used now to haul long trains of passenger coaches and freight cars will eventually be displaced and become antiquated and a memory, as are the old horse cars of twenty years ago. That this is the tendency is borne out by the present use of some railroads, notably the New York Central and New Haven, of large electrical Westinghouse motors. The experiment is even now being tested of propelling cars with electric storage batteries so far with some measure of success. If this new power is perfected, even greater economy in operation will be introduced, dispensing as it will, with trolley wires and costly power-generating stations which it is now absolutely necessary to maintain. The interurban electric roads have even another important advantage over their older rivals, the steam roads, in that they can stop for passengers anywhere desired, by the motorman simply turning his controller. The steam roads can only stop at designated stations according to schedule.

That huge amounts of capital have gone into these projects occasions no surprise, nor is it strange that we should witness the increasing favor the public is showing towards public service corporation securities, especially those of the more conservative type. Yet the evolution

from one form of motive power to another has brought some strange changes in its train. In New York City, the old lines, already overcapitalized, were compelled, with each change or step forward in economy of operation, to increase their capital burden, with the result that in the end they collapsed, in spite of the fact that in a city like New York, where there is such a density in population, the revenues derived from carrying passengers from one part of the city to another should be exceedingly profitable. But by adding obligation upon obligation to their capital, the New York traction financiers succeeded in making it obligatory on some of the lines to earn profits on as much as $1,000,000 capital per mile and all on nickel fares. Small wonder that the end was bankruptcy and such a tangled state of affairs that a long period must elapse before the New York surface lines can be successfully extricated from their financial embarrassment. Charles T. Yerkes brought about a similar state of affairs in the West Side and North Side lines in Chicago, which required years to readjust, and only after disastrous losses were sustained by thousands of shareholders. Philadelphia is similarly afflicted with an overcapitalized traction system. Happily, these cases are only the direct results of an evil proceeding from the desire of the interests in control to fatten their fortunes at the expense of the public and investors. Where there is a normal capitalization and the properties under the control of honest and conservative management, they have proved for their shareholders a more than satisfactory source of revenue, and the secured obligations, like the bonds, have shown themselves among the safest forms of investment.

But in judging this class of investment, there are a number of important factors which should be taken into consideration. First and foremost, is the franchise under which the public service corporation operates. Especially is this of importance as far as the bonds are concerned. The franchise is the keynote of their success in business. We have

seen how unfortunate it sometimes turns out for a public service corporation, when its franchise expires, as in the case of the traction companies serving the cities of Chicago and Cleveland, and to a less degree likewise in Toledo and Detroit. The difficulties between the cities of Chicago and Cleveland and the traction companies are now adjusted on terms mutually satisfactory to both interests, but not without considerable loss to shareholders and bondholders alike. In Detroit and Toledo, the renewal of the franchises still remains open, the cities and the companies not being able to arrive at a settlement of their troubles. Eventually their difficulties will be amicably adjusted, as the public has always shown a disposition to be fair.

Public utility corporations unfortunately are in a vulnerable position to become the shining target for ambitious politicians, who, when they find they cannot win votes by any other propaganda, as a last resort, turn upon these corporations in their own community. By making it appear that they are in business to oppress the people, they endeavor to arouse an agitation for the fantastic scheme of public ownership and operation. It is a useful propaganda to win votes. In most of the cities where this scheme has been tried, it has proved a flat failure. And failures they will continue to be until the average politician and henchmen who feed at the public crib, develop capacity as good business men. But as long as these clashes take place, the length of a company's franchise is an all-important question in properly appraising its securities for investment and speculative purposes.

If the franchise expires after a company's outstanding bonds mature, some authorities contend they are safe investments, providing the net earnings indicate a sufficient margin in excess of the fixed interest charges. In this contention they are partly correct, since, whether the corporation redeems its bonds or not, the expiring loan in some manner must be paid.

A corporation's management, is, in my opinion, of equal importance. If that management follows a policy of catering to public opinion and bends every energy to supply its products to the community at a reasonable charge, after allowing for a fair profit, the probabilities are that the community and the corporation will exist in peace. It has been demonstrated in a number of instances that such wisely managed properties have had public opinion behind them when attacked by designing politicians.

Some public service corporations are very fortunate in owning perpetual franchises. This places them in an unassailable position. They do not face the danger of a possible contest over the renewal of their privileges. The only danger that may confront them is where the community grants a rival company another franchise, but this does not always turn to the public's advantage. This is at least true as far as concerns the use of the telephone. When it becomes necessary to use rival telephones to give a satisfactory service, it is very seldom profitable. There is no advantage where there are two charges without obtaining any additional benefit, when one service can do the work equally well. Generally speaking, this advantage affects equally all public service corporations.

There is one development in the recent financing of public service corporations which should not be overlooked—the tendency towards conservatism. In this, those directly concerned in promoting them have shown that they have absorbed a lesson from past experience. They now build their structures on firmer foundations. New bonds issued for improvements are on a more reasonable basis. In many cases it is stipulated that additional bonds shall only be sold up to from 75 to 85 per cent of the actual cost of additions and extensions, thus creating from the very beginning a substantial equity above the bonded debt. Where it is possible, the builders of interurban trolley lines secure private rights of ways to overcome difficulties regarding franchises.

The states also have realized the wisdom of cultivating capital rather than discouraging it from entering upon projects designed to serve the public convenience. Public service commissions have been created to deal intelligently with this problem. These commissions are vested with the power to allow the corporations under their control to increase their capital as well as to refuse the privilege when it appears that the necessity for more capital does not really exist. It is also within the power of these boards to refuse franchises when, in their opinion, a rival corporation, instead of benefiting a community, adds only a burden. While, of course, this system of control has some disadvantages, the general good they have thus far accomplished, outweighs the drawbacks. At least it shows a desire on the part of the states to take the public utility corporations out of politics, which is more or less at the bottom of most of the friction between corporations and communities.

However, it cannot be denied that, for some years, the public service corporations have as a class, made such an excellent showing as consistent revenue producers, that they have become popular with the investment public. The panic of 1907 and the year of depression which followed gave them an excellent opportunity to demonstrate their stability. A great many of the companies turned this hard corner with increased earnings, whereas the earnings of corporations operating in other fields showed a sharp falling off.

There is a logical explanation for this. It must be borne in mind that the public can save little on gas, light, heat or power. It must ride back and forth from business. What is lost by a smaller consumption is far more than made up by the increased demands of a growing population. Statistics prove that.

Then, also, well-managed gas, heat and electric light corporations have carried on a campaign of education, showing their patrons how their service may be used

in other directions, thus increasing their patronage. Electric ranges and gas stoves have proved splendid drummers for business. The uses of electricity for advertising have also been a source of considerably increased revenues. Electric power plants as well as plants generating power from water, have made a permanent place for themselves wholly by the economy they have introduced in the cost of power.

All these factors are worthy of consideration in so far as they explain the influences behind these corporations working for their success. As they are in a business of providing actual necessities, they are indispensable to a community. The investor, therefore, is assured that the business has, at least, solid ground as its foundation.

When electricity was first discovered, it raised the fear that the end of gas as a source of light had been reached, but this apprehension has proved unfounded. More gas is consumed today than ever before and the consumption is likely to continue to increase. While interurban electric roads have done a large business and are aggressive competitors of the steam roads, it is nevertheless a fact, as is shown by their increased revenues reported to the Interstate Commerce Commission, that the railroads are doing a larger business than ever before. The hydro-electric power plants have by no means cut into the output of the coal mines. In fact, our constant growth in population can be relied upon to use all the new means available for creating power, light, transportation and heat.

Another fact worthy of comment, is the tendency towards concentration of management of public service corporations into holding companies. Quite a number of such corporations have been organized and as a general rule have been successful. One of these companies controlling a large number of subsidiary companies operating in cities has earned exceptional profits for its shareholders.

These holding companies, unlike their namesakes, op-

erating in the railroad and industrial field, are virtually immune from the restrictions placed by the Sherman law over all interstate commerce, or business transacted between different states. Their business is all concentrated in the communities which their plants supply. Only when they control electric roads crossing two states are they subject to the law Congress enacted to control trusts from restraining free competition.

As it is compulsory in nearly all states for public service corporations to publish detailed statements of earnings, the purchasers of these securities have little difficulty in determining the investment opportunities and speculative possibilities in their bonds and shares.

The truth is that there is more compulsory publicity governing this particular class of corporation than with any other class. The reason is that the public, by whose will they exist, have more than an ordinary interest in their success and behavior.

XII. OTHER BONDS.

There still remain other means by aid of which corporations manage to borrow money, but they do not involve the necessity of pledging any tangible assets, as is the case with the different bonds described in the previous section.

It is not by their names that these bonds may be known, for they, too, are known as bonds. It is by their character that they should be known, by which I mean that the investor ought to look carefully into them, for, masquerading, as they do, under the general name of a bond, there is always the possibility of acquiring a security without any intrinsic value behind it, which fact is not discovered until after something goes wrong.

Prominent among such securities is the *income bond.* To the uninitiated investor, the word "income" has a confidence-inspiring swing to it, but in all reality, the so-called income bond only pledges the corporation to pay the promised interest when it is earned, and not otherwise. A case in point where such a bond proved no better investment than a non-producing stock, was that of the income mortgage bonds of the Central Railroad of Georgia, of which there are three—the first, second and third preferred mortgage income bonds. On the second and third income bonds, the interest has not been paid for some years, and finally, in exasperation, the holders of the second income bonds brought suit to force the company to pay them their interest first before diverting the net profits to improvements. While they won their case, their predicament during the years when no returns were received conveys its own lesson of the insecurity rather than the security of the income that lurks behind an investment in income bonds. Some stocks are preferable to income bonds. Such bonds should be thoroughly

investigated before accepted as a desirable investment; especially should the profits the company is earning and has earned over a period of years be looked into, for it is from this source the payments of the interest on the bonds are derived.

There is also the *collateral bond,* not differing very much from the income bond, except technically. Bonds of this character have as their security stocks or bonds in other corporations. There are many of this class of bonds in existence. They are the outgrowth of the tendency in recent years of the stronger corporation to absorb the business of rival corporations, and they are also the direct outgrowth of the holding company plan. The holding company is a form of corporation which is not itself directly engaged in business, but which holds the controlling stocks and bonds of actual operating corporations, and against the ownership of these securities they issue their own stocks and bonds. It is these holding companies that have acquired the name of trusts.

In nearly every important industry may be found the holding corporation. To mention a few, there are the American Tobacco Co., the International Harvester Co., the Interborough-Metropolitan, the Rock Island Co., the American Chicle Co., and the International Mercantile Marine, all corporations owning the majority of the securities of other corporations. These are only a few of them.

Some of these holding corporations have issued bonds, pledging for their security either the stocks or bonds of the subsidiary corporations. They are the collateral bonds. Other corporations which do not exactly come within the definition of a holding company also issue such bonds. For this interest they depend upon the earnings or income received from other underlying securities.

An applicable illustration of what collateral bonds are is found in the Interborough-Metropolitan 4½ per cent

collateral bonds. For each unit in this bond of two hundred dollars, there is pledged one share of stock, with a par value of \$100 of the Interborough Rapid Transit Company, which operates the Subway in New York City. This underlying company pays 9 per cent dividend each year on its stock, which is equivalent to the 4½ per cent interest paid on the collateral bonds.

These bonds differ from income bonds only in that their interest must be paid. This is an implied obligation. The interest is paid as long as the collateral securities back of the bonds earn a sufficient income. When this income falls off and a default takes place, the holder of such bonds may take over the collateral by due process of law. They then find themselves in the position of falling heir to other securities, either as stockholders or as bondholders in the underlying corporations. The fact that the securities were unable to earn enough to pay their interest, in most instances does not improve the situation much. From a standpoint of safety, the majority of collateral bonds, as a final analysis, cannot be ranked as suitable investments for any one dependent upon income and security.

It may well be said for some of these bonds that they are entitled only to the designation of bonds to distinguish them from stocks, in that they place their holders in the category of creditors of a corporation, whereas a stockholder can only participate in the profits when there are any to disburse. The one must be paid to maintain the corporation's solvency; the other must take its chances.

Not infrequently a strong corporation employs its credit merely as the sole security for an issue of bonds. At other times, in addition to pledging its credit, other collateral may be added. Where such bonds are issued they are termed *debenture bonds*. In reality they are but a note like the plain merchant's note such as banks discount every day without calling upon the borrower for any other security than his

name affixed to his note, accepting his credit rating as sufficient guarantee that the note will be paid when it matures, or else if the bank is not wholly satisfied with the standing of the maker of the note, it will demand, for added security, that the note be endorsed by one or more persons satisfactory to the bank. In the debenture bonds, a corporation, instead of going to the banks for a loan, approaches investors whom it is prepared to pay a fixed rate of interest for a term of years, for the use of their capital. Such bonds should be appraised by the rule applied to a merchant's note—on the credit standing of the maker, and this is usually determined by the periodical statements of earnings issued, indicating the profits in excess of all operating costs.

In the *convertible bond,* modern finance has evolved a device to tempt forth the capital of investors who, while still wishing to maintain their position as creditors of a corporation, desire a speculative opportunity to share in the future prosperity of the business. The convertible bond serves this end. Such bonds carry a call upon another security at a given price, usually considerably in excess of the market value at the time the bonds are issued. When the convertible price is reached, the holders of the bond may exercise the privilege of exchanging their bonds into the other security. The convertible bonds of the Union Pacific issued some years ago brought a round profit to those who held them until the company's shares reached their conversion price. The Atchison is another road where this also happened. Among the industrial corporations a striking example is the American Telephone & Telegraph Company, whose shares advanced to where it became profitable for the holders of an early issue of convertible bonds to exchange them for the company's stock which was receiving 8 per cent in dividend, in contrast to the smaller interest received from the bonds.

Quite a number of our corporations have resorted to convertible bonds as an expedient to make loans, but

the successes attendant upon some of these issues by no means cloak these securities with the character of unusual investments. On not a few of this class of bonds, the convertible privileges represent a forlorn hope that an opportunity of making a profitable exchange may present itself. Seldom are there any assets of a tangible character pledged behind the convertible bond. If such is the case, their character is stipulated in the mortgage. They are considered as coming within a semi-speculative class of investments. For that very reason they should be carefully scrutinized by investors. Their safety largely depends upon the issuing company's continued prosperity.

With a description of a few more securities included in the definition of bonds of a general character, I shall close this section.

The most important of the securities which still remain to be described is the *short term note*—a useful financial expedient in periods when there is a scarcity of capital and, because of this condition, exacting interest rates. To meet this situation, corporations borrow capital for their pressing needs for only a short term of years by means of notes running for a brief period, and agree to pay interest on them in accordance with the current rate. In hard times it would be folly for a corporation to make a long term loan for two reasons, one of which is that such a loan, at the current high rates, would prove unusually expensive if spread over a long time, and the other and more important reason is the disastrous influence likely to follow in depressing the price of the outstanding bonds which a corporation had sold when there was a plethora of money and interest rates were low.

If the holder of a 4 per cent bond having still ten years to run, saw an opportunity to replace it for a 5 per cent bond of his corporation which would not mature before their security matured, the natural inclination would be to exchange the one for the other. It is

to equalize the interest with the bonds already outstanding, that short term notes are employed. This class of securities crowd upon the market in panic years and in the years of depression which follow. Other securities might mature in these abnormal periods which must be taken care of or capital may be needed for other purposes.

The late H. H. Rogers, rich as he was, found himself in a tight corner in the panic of 1907. He was just finishing the Tidewater Railroad and needed a few million dollars hurriedly. It was out of question to raise this money by offering first mortgage bonds, especially on an incompleted railroad. The banks were not lending any money except on gilt-edged collateral. Mr. Rogers could not allow his cherished ambition to fail in this critical period without striking a great blow at his prestige. He was forced to issue short term notes carrying 6 per cent interest and had to pledge to insure their security a large part of his investments in Standard Oil, and shares in banks and gas companies—in all over $18,000,000, the income on which more than a number of times provided for the interest on the notes. Mr. Rogers' experience illustrates that periods are reached in nearly every rich man's career when borrowing money is not an easy matter.

Nor do corporations escape the exactions placed upon them by hard times. Municipalities enjoying in normal times the best of credit, are forced to pay large interest to borrow what money they need. A case in point is that of the city of New York, which although at one time, only a few years previous to the 1907 panic, readily sold 3½ per cent bonds at a premium, was forced to raise its interest rate to 4½ per cent.

To the average investor the purchase of bonds is based on the interest they pay, but that is not always the income they yield. Figuring out income is a science in itself. A bond may call for 4 per cent interest per annum and yet may yield a larger income than a 5 per cent bond, due to the

earlier maturity and to the fact that it is selling at a discount, whereas the other bond may run longer and be quoted at a premium. A table is published and used by all bond dealers, by which may be determined what the income yield is on each bond for the length of time it has to run, the price it can be had for and the fixed rate of interest.

Reverting to short term notes, corporations by their use finance their needs to bridge a period of tight money, depending upon their ability with the return of easier conditions to refund these obligations with a security which calls for a more reasonable interest rate. Most of the large railroads and industrial corporations have found these short term obligations a great convenience in trying times.

We have what are known as *trust receipts.* These are receipts issued by a trust company in return for securities placed with them as custodians. These receipts, like bonds, are issued in a negotiable form so that dealings in them can be carried on readily. There are voting trust receipts, a security protected by another security for which a voting trust has been formed, consisting of a number of directors. They are also negotiable. The scheme of the voting trust is to maintain the control of a corporation in certain hands for a prescribed length of time in order to insure one continued management of its affairs. The idea when properly applied may turn to a corporation's advantage, but sometimes it is used to perpetuate, for a number of years, control in certain hands without the necessity of making heavy investments, which would become the case were not all the stock in a voting trust.

Interim certificates are merely promises to deliver bonds or other securities when they are ready for distribution and which may not be engraved and all signed by the proper officers when they are first offered to the public. In their place, certificates, called interim certificates, issued to bearer, are given to be exchanged when the other securities are ready for delivery.

Last, but not least in importance, is the *certificate of deposit,* which, as its name indicates, identifies the holder as having deposited at a certain place the securities described in the certificate. These certificates of deposits are the outgrowth of the reorganizations of embarrassed corporations. When this unfortunate situation is reached, the more important holders of the securities form a committee for the mutual protection of all the holders of the same class of securities. An agreement is drawn up by attorneys, vesting this committee with certain powers to effect a reorganization, and a call is issued to the security holders to deposit their security with a designated trust company. In signing this agreement and upon deposit of their security, the holder then appoints the committee his agent or attorney to do all of the things stipulated in the agreement and share ratably all the expenses his committee contracts for. The trust company which acts as a depository issues a certificate of deposit, usually to bearer, identifying the holder as the true owner of the securities as described which have been deposited with it. Then, when a reorganization has been brought about, whatever new securities are authorized in the place of the old ones, are exchanged for these certificates of deposit after all expenses of the committee have been paid. Certificates of deposit may apply equally to stocks as well as to bonds. They are merely mentioned here as a security which, applying to bonds, may as well be described now as later. As their very character shows an interest in a bankrupt corporation, there is hardly any necessity to discuss their investment value. That depends entirely upon the security itself which is pledged. If a first mortgage bond, then there may be behind it more than enough property to protect the creditor in full, including, even covering, the accrued interest. Sometimes this does not appear to be the case, as, for example, the first mortgage bonds of the insolvent Wabash-Pittsburg Terminal Railroad. The holders of these bonds were com-

pelled to fight to keep from having to take an inferior security in return for the one they now hold. The certificate of deposit, the negotiable instrument evolved by the reorganization idea, in our scheme of bringing to life once more our prostrate corporations, is credited with owing its existence to the ingenuity of J. P. Morgan, the greatest reorganizer, more than to anyone else.

With a brief mention of commercial paper we shall have disposed with this security. Essentially forming an investment more for banks than individuals, it will hardly interest the student of finance unless he is shaping his education towards a banking career. The degrees of safety in commercial paper vary with the standing of the maker. Prime commercial paper is the note with but simply the maker's name. With each endorsement there is indicated the exactions placed upon the borrowers by the banks before they will make the loan. Yet this is not always true. The paper of some large corporations, to make it readily saleable through note brokers, will carry a number of endorsements.

XIII. IRRIGATION BONDS.

It is the history of every virile and progressive nation that in time all of its land capable of subjugation to the plow becomes occupied. We are in such a period now. Our principal reservations, consisting of natural tillable land originally set aside for the Indians, whom the country has considered its wards, have all been opened for settlement so that even this pre-empted land is now largely occupied by white settlers.

But our population continues to grow. With its growth there has arisen a serious need to employ our arid lands for agricultural purposes. Of such land we have enormous stretches. Efforts are now made to reclaim these lands by bringing water to them by artificial means. Not only are we considering means by which the parched sands of our different desert areas may be made to blossom, but we are also hard at work planning how our swamp lands may be redeemed for agricultural exploitation by draining them of their stagnant pools and bayous.

Our population has grown so large that every square foot of ground that is possible to reclaim by artificial methods is worth while saving. It matters not whether this can be accomplished by irrigation or drainage.

Our own government early recognized the possibility of reclaiming its deserts by harnessing mountain streams and turning their waters to beneficial use. The government has already spent millions of dollars in building giant reservoirs for the storage of water, and ditches to carry this water to lands which needed it in order to become productive.

Irrigation is by no means a modern science. It is almost as old as the human race itself. The ancient Egyptians of

the Nile Valley depended upon it as early as in the time of Ptolemy and had developed it to such a point that their country was virtually the granary of the ancient world. With us, however, irrigation is a somewhat new problem, as it was not necessary for us to go to the length of artificially watering land while there yet remained open for settlement plenty of land well-watered by nature and cultivable by natural means.

Private capital, always keenly alive to opportunities for profit, has also seen opportunities in the work of reclaiming our large arid land areas. What the Government could do, capital felt it could do also. The result has been that within the past few years a considerable number of privately organized irrigation projects have sprung up, capital for which has been raised by the sale of irrigation bonds. As this class of bonds constitutes by no means a seasoned investment, it should be most carefully considered before being selected as a profitable and safe medium through which to make investments.

Already a large number of these projects have failed because those back of them were inexperienced in this particular field and allowed their optimism to becloud their better judgment. It requires more than the mere building of reservoirs and ditches to carry the water, to assure the financial success of an irrigation project. Not only is a continual supply of water requisite but also the certainty of a sufficient number of farmers to settle the land is necessary. Likewise, these farmers must know how to cultivate successfully land supplied with the required water provided by artificial means, as irrigation is a method of farming wholly distinct in character from that followed on farm lands nourished by rainfall.

Our Government recognized the danger likely to arise from the reckless exploitation of irrigation schemes and, as a measure of protection for the farmer and investor alike some years ago enacted what is known as the Carey Act.

Under this act, authority was conferred upon the states and territorial governments to pass upon the plans prepared by privately organized irrigation projects for the construction of reservoirs, ditches and laterals, or small canals by means of which the land was to be fed with water. By the same act rights to the available water supply were conferred to prevent the overabsorption of the needed supply by too many separate enterprises, but despite these wise precautions, failures have occurred indicating how much judgment can err in an entirely new and untried field.

As irrigation bonds are a distinctly new security, it is interesting to know on what they are based and how they are issued. The capitalists behind these projects aim to raise the money required to construct their reservoirs, ditches and canals by the sale of first mortgage irrigation bonds. They incorporate a company which is to own all the facilities for storing the water and carrying it to the land. They stake out the acreage for which their company is to supply water. They then sell to newcomers the water rights for a fixed sum per acre. To make the illustration clearer I shall say they ask $40 an acre for their water rights. This gives the settlers perpetual rights for the use of a certain quantity of water for their land each season. To secure these water rights the farmer gives a mortgage on his land. These mortgages are the collateral pledged to secure the holders of the irrigation bonds and as the farmers pay off their mortgages in easy installments, the bonds are retired serially at different maturities. The stockholders in these companies expect their profits from what is left after the bonded debt is cleaned up.

All this of course is feasible. Experiments have proved that the chemical elements in desert land, when properly watered, give the ground a richness and fertility which make these lands prolific producers of certain agricultural products. The Twin Falls section of Idaho is a very excellent example of the large measure of success possible from the

application of intelligent irrigation. Not only has this section of the state prospered in an exceptional degree by harnessing the mountain streams and diverting their waters to the dry lands where most wanted, but, as a direct result of the large agricultural population thus brought in, a number of prosperous towns have sprung up which would never have existed under any other conditions.

But the mere presence of water in arid countries is not always a guarantee that dependence can be placed upon a sufficient supply in dry seasons. Desert streams are likely to thin out at the most critical time. Herein lies one danger likely to threaten an irrigation project. Skilled engineers of long experience are necessary to gauge the quantity of the water supply, to build reservoirs in the right places, to construct economically the necessary ditches and canals so that there will be no likelihood of the clogging up with the shifting sands in the near future. Even then all these provisions do not make for absolute safety of irrigation bonds. There must also be the certainty that there is no legal flaw to the rights to the water supply; also that there will be no disappointment in the sale of water rights sufficient to provide enough acreage to redeem all the bonds and pay all the interest. The mere fact that a reservior is constructed, also all the ditches and canals, is not in itself a complete assurance of the safety of irrigation bonds, as the farmer is supposed to pay off his water rights in easy payments covering a stated number of years and he can only do it by obtaining his water regularly.

A dry season is likely to cause an irrigation company to default on its interest because it will be unable to collect from the settlers their payments, unless behind the projects are financial interests strong enough to see it safely through an off season. Likewise until such projects are completed and settlers for the land secured, the irrigation bonds it issues, properly considered, are construction bonds, that is,

bonds of an incompleted enterprise whose interest must be provided out of the treasury of the company until it is in a position to earn revenues.

There are no bonds more speculative than bonds of this character. In fact the interest their holders receive, in most instances, comes directly from the very money they pay in for their bonds. Because of this element of uncertainty, it is of vital importance that the financial standing of the backers of an enterprise, no matter what its character, be carefully weighed, to determine whether they are strong enough to finance their project to completion. However bright the prospects may appear, no enterprise can take advantage of them until it is first completely financed. For the risk investors must assume in a project in the process of construction, they should, in all fairness, receive, in addition to the bonds they buy, a certain proportion in stock as a bonus, for they speculate on the chances of success, and should financial difficulties arise, which is always a possibility, they face an assessment in an effort to raise the money to again put the enterprise on a going basis.

Some of the bankers who have handled such issues of securities have realized these elements of chance and have made provisions to overcome them by guaranteeing their bonds, both as to principal and interest, by the assets and income of a going and prosperous concern. But not all bankers are so far-seeing. The result is that in some of these issues which have defaulted their holders have found themselves in the distressing position of possessing a very insecure bond and that they could not be worse off had they been stockholders, instead of bondholders.

All this is clearly pointed out to the readers of this book to acquaint them properly with the care necessary to exercise in properly appraising the different classes of irrigation bonds coming to their notice.

In theory, irrigation is practicable. Its value to this country now and in the future cannot be disputed. As we

gain a greater knowledge about its proper application, there will be less experimenting with other peoples' money, as is always the case when capital ventures into new and untried fields.

Our Government, as late as 1910, authorized a large issue of bonds, the proceeds of which are to be used to carry forward on a much larger scale, the irrigation work planned by the Department of Reclamation. Those bonds are to be redeemed out of the money realized by the Government from the sale of water rights to the settlers.

Some of our western states, in an effort to reclaim their arid lands, have arranged by legislation that certain districts may organize into municipal districts and issue bonds for irrigation purposes. But their bonds are by no means as safe as the bonds which the new government irrigation laws authorize. They are in fact, in some instances, inferior to irrigation bonds of privately organized enterprises. These municipal irrigation district bonds depend for their interest and redemption upon the ability of the community to pay the taxes. In a good many instances, the amount of such bond issues is not based on the already existing population, but on a future population that is expected when the district receives the full benefit from the irrigation planned by the issuance of the bonds. If the irrigation project is a failure and the expected water does not materialize, naturally the settlers then have no means to meet their taxes and their lands which remain dry are hardly then worth foreclosing upon. That this is possible has already been shown by the default of interest on a number of such municipal irrigation district bonds of Colorado during 1910 and 1911.

XIV. BONDS IN MINING ENTERPRISES.

Beyond all doubt there is no type of bonds more speculative than those issued against undeveloped ventures, whatever their nature, be it coal, silver, marble, lead, zinc, gold or copper properties. For one thing they are secured by an invisible asset, whose value can only be estimated by the uncertain skill of mining engineers.

We are told, especially in connection with copper-mining properties, that mining engineers have so far reduced their profession to an exact science, as to be able to determine, where indications of copper ore have been discovered, how they may block out the ore and measure the amount underlying the claims. This they claim can be done by drilling to get at the percentage of copper to each ton of ore, and then, by multiplying the one by the other, arrive at the value of the underground deposits. In other words they contend they can reduce mining to a point where there is no more uncertainty regarding its ultimate outcome than in manufacturing.

I do not put any faith in this specious argument, at least not so long as some of the most prominent mining engineers continue making serious blunders in their estimates. John Hays Hammond, who is regarded as one of the foremost men in his profession, has repeatedly erred in his reports on mining properties.

If it is possible to measure with any degree of certainty the treasures Mother Earth conceals, it does not reach far beyond the coarser mineral formations like coal and marble. The last mentioned, because it is of a quarry formation, comes in vast quantities and where found is of a perpendicular formation, in layers or strata, thus permitting one to place a certain reliance upon measurements. Coal, on

the other hand, runs in horizontal layers, for it is formed by the carbonization of decayed vegetable life. The softer coal, or that known as bituminous coal, lies nearest to the earth's surface. As coal is found in blanket formation, it is possible, where a field is discovered, to determine to a certain extent the quantity of the deposits by means of core drilling.

That is not true, though, of the more precious minerals. Nature has not been so provident in the distribution of these minerals that their quantity can be measured by any yard-stick. It is the writer's contention that of all assets, undeveloped mining properties do not at all properly belong to a class of securities on which bonds should be issued. An investor might as well take his chances with all the other stockholders in the enterprise and share in the profits if the undertaking proves successful.

A bond in an undeveloped mining enterprise represents the most perishable kind of asset. If the mineral yield becomes exhausted, the property then has no value beyond the mills and mine structures, which at most, as assets, are not worth very much, unless usable by a going mine.

The holder of a mining bond has to depend for the return of his principal and interest upon the profits realized from the ore produced. It is therefore necessary that the mine's life and production shall extend beyond the maturity of the bonds issued by it. How can this be known to a certainty?

The majority of mining bonds are issued as convertible bonds, giving the holder the opportunity of changing his position as creditor into partner at a certain fixed price for the stock, but it may be assumed that if a mine development points to success, the bondholder might as well from the beginning be a stockholder, considering all the risk he has to take, for did the mine fail, he would be out in the cold with the stockholders, except in that he could foreclose upon barren, unproductive mining claims of no value.

Bonds in oil companies are of a similar class. No assurance can be placed upon the continuation of the oil supply. To satisfy ourselves as to what a dangerous class of investments these bonds belong, we need look no further than the great mass of such defaulted securities.

Of course, I refer principally to mining companies in process of development. There are mining properties whose bonds come within the category of investments. These bonds are, however issued by corporations which are already assured of a certain production and have issued bonds to provide funds for opening up new areas, but which are not dependent for their redemption upon the new ores, but assure their payment, both as to principal and interest, out of their present and known production. There is a large number of such mining corporations, notably so in the case of successful coal-mining companies.

I have now covered as fully as it is possible within the narrow compass of a popular text-book, all the principal classes of bonds. A reference might be made to steamship bonds which have as their security the vessels controlled by the corporations and also its wharves and docks. The values in such bonds must be considered in the light of earnings statements issued by these corporations, the insurance funds on hand in case of loss of vessels, and the allowances made for depreciation to provide for the wear and tear in water transportation.

What wise provisions should be made against the elements steamship lines must constantly fight against has an illuminating illustration in the loss of the steamship "Republic" of the International Mercantile Marine Line, a disaster that is still fresh in our memory. The sinking of this steamer resulted in a total loss of over one million dollars. Still the loss of this palatial steamer had no effect upon the corporation's resources. It had for years set aside a certain percentage of the gross earnings as an insurance fund for this very eventuality.

XV. TIMBER BONDS.

Our available timber resources have reached that stage of depletion where what timber tracts remain are considered exceedingly valuable. So much so is this the condition that within the last few years timber bonds have come to be regarded as desirable for use as security for bond issues. Standing timber of itself is only valuable when it can be cut and brought at a profit to the market. But for the purpose of securing a bond issue, there are certain elements of risk which should be seriously taken into consideration. Above all, the greatest risk is that of fire, which is likely to quickly denude a tract of the greater part of its standing timber. Insurance companies will not accept risks on standing timber, for they consider the hazard as too great.

The owners of standing timber, however, attempt to guard against fire by many ingenious methods: building ditches and embankments through the tract to check the spread of a fire; establishing patrols and fire stations; cutting away the thick undergrowth; and back-firing a forest by experienced foresters. But notwithstanding all these wise measures of precaution, bonds based upon timber lands should be classified as coming within the class of speculative bonds, from which, because of the risks involved, an unusually good income should be received by those who invest their money in them.

A timber bond issue is based upon the quantity of standing timber against which the bonds are issued. "Cruisers," or men who measure the timber, are depended upon to make the estimate and on their figures and the market price timber commands, the bonds are issued. From this it may be inferred what great dependence the investors must place upon the accuracy of human intelligence.

To retire the bonds a certain percentage is set aside each year from the sale of the timber, and that percentage should be large enough to redeem the bonds automatically, as every foot of timber cut correspondingly reduces the assets securing the bonds, which cannot again be replaced except through new growth from replanting. Where this is done, it is a slow process.

There is no general rule by which the intrinsic value of timber can be measured, for chance and the immeasurable human element largely enter into it. The character of the men behind such propositions is equal in importance, in connection with the safety of timber bonds, to the safe guards against fires. The conservative appraisal of the amount of timber available, the nearness of the tract to a market, the price of the timber and the percentage set aside from each year's sales, all have an important bearing on such bonds and demand from investors their most careful scrutiny.

XVI. GUARANTEED STOCKS.

Large corporations sometimes find it more convenient, in securing control of smaller corporations whose strategical position or favorable earnings will benefit them, to guarantee the interest on their bonds and dividends on their stock, than to lay out a considerable amount of money to acquire them. Often control cannot be acquired, as the majority of the holders of the securities of the corporation will not part with them, but do not object to a lease of their property in return for a guarantee of a certain dividend upon their shares.

There are a large number of small railroads whose names, if given, would be unfamiliar now to the general public, although they are very prosperous properties, whose dividends on their shares are guaranteed by other railroads. These roads were taken over by lease many years ago, and have become so grafted into the main system of their guarantor roads, that they are today, in all essentials, a vital part of the larger corporations.

Parts of nearly all of our principal trunk lines are made up of smaller roads welded into one, although existing as separate corporations. This is the condition which investigation will show exists in the cases of the Delaware & Hudson, the Lackawanna, the Reading, the Pennsylvania, the New York Central, the Lehigh Valley, the Jersey Central and other roads. Some of the small roads whose dividends these roads guarantee, existed before the holding corporations came into existence. The Morris & Essex Railroad is an example. The road was built before the Delaware, Lackawanna & Western, as one system, was planned.

Quite naturally these guaranteed stocks as an investment are graded according to the importance which the

properties bear to the corporations leasing them and also with respect to the financial strength of the guarantors. With such financially powerful corporations like the Pennsylvania and the Lackawanna, the stocks of leased lines whose dividends they guarantee, grade as high in conservative investment circles as do their best mortgage bonds. That is why these stocks sell at a stiff premium. The dividends guaranteed on some of these leased lines' stocks run as high as 12 per cent to 16 per cent per annum, but they command prices which reduce their net yield close to 4 per cent per annum. The holders of these securities, which consist either of estates to whom the shares were left, banks, life insurance companies and individual investors, are not anxious to dispose of these stocks, as they fully realize the intrinsic value of their investments. The more closely guaranteed stocks are held, the more it reflects the superior position accorded them in financial circles.

There are leased line guaranteed stocks which could be safely regarded as immune even from the severest panic. Their impregnable position is entirely due to the fact that they could not be adandoned without dismembering an important system, a thing which the owners of securities amounting to millions, would not permit under any circumstance.

Railroad policies enter largely into the policy of absorbing other roads by means of leasing. The elimination of competition at times, is behind the policy. At other times one road will acquire control of another to keep an important rival from gaining an entrance into a certain territory. Again the purpose behind such a deal may consist simply of the idea that the lease would prove profitable.

The long-headed people back of the Canadian Pacific had plans to get into Chicago. To build a road to the important traffic-originating centers would prove a costly bit of financing, and even then it would remain a serious problem whether a new line could earn its board. Therefore,

when the Wisconsin Central was in the market, the Canadian Pacific saw an opportunity to reach Chicago without great expense, by leasing this property, in return for which it guaranteed a small dividend on the road's preferred stock.

In the expansion of our railroads, the practice of absorbing, by lease, important roads with which an alliance would be profitable will go on steadily. With the growth of traffic on these leased lines, their business frequently turns into the treasury of the controlling road a good profit, as they are entitled to the profits in excess of what is required for the dividends they guarantee.

As the earnings of the leased lines are included in the earnings of the controlling lines, there is no way of determining what is their actual income return. But in this the investor is not actually interested, as long as the guarantors hold good their guaranty. It is realized that they cannot default in the payment of the dividends without losing control of the property, which they seldom desire to do.

Industrial corporations also guarantee the dividends of rivals they have absorbed. Their guaranteed stocks should be judged by the margin of profits they report in their annual statements. In this manner their security as investments can be properly appraised.

XVII. AMORTIZATION AND SINKING FUNDS.

Amortization means the reduction of debt. A corporation issuing bonds may prefer to provide for their payment when they mature through a sinking fund, for the account of which a stated sum is set aside each year, rather than to rely on other means to discharge the debt when it falls due.

This policy has many advantages. It makes it much easier to discharge the debt, as the payments made when spread over a period of years are less burdensome than when provided in a lump sum. Then, also, contributions to a sinking fund to amortize gradually a bonded obligation, can be made to earn interest, which interest, compounding itself, also accumulates money towards the payment of the debt. Thus money is made to earn money.

It is frequently provided, in the interest of a sinking fund, that bonds, for the retirement of which the sinking fund has been created, can be repurchased at a stated price, either by call upon the holders of the bonds or in the open market. A corporation either then cancels the bonds and reduces its fixed charges, or pays into the sinking fund the coupons of the bonds which have been purchased for its account.

There are various ways by which a sinking fund operates. They cannot all be mentioned here. But a bond that has set aside for its retirement a sinking fund, or for which arrangements have been made to amortize by gradual payments is considerably strengthened as an investment where the operations of a corporation are profitable.

The fact that a sinking fund has been created for the retirement of certain bonds is not alone proof of strength. If a corporation is making no profit, it cannot lay aside money for its sinking fund. Certainly it cannot take the

necessary money out of its capital, as that only weakens the corporation in one direction, without strengthening it in another.

Where the advantage of amortization lies, is in connection with bonds issued by producing mine companies, and corporations engaged in operating in perishable assets. By setting aside a part of the proceeds from the sale of its products, it is more certain to retire the bonds when they mature. Without a sinking fund, such corporations face the danger of not having the money on hand to pay off the bonds and have no way of attaining it, should their properties exhaust themselves.

XVIII. BONDS FOR WOMEN AND ESTATES.

Investments for women and estates ought to have eliminated all the speculative elements, as far as human foresight can guard against them. Women and children belong to a class of investors who can least afford to take risks, no matter how small, as they have no means of repairing their losses in the event that any of their securities go wrong, dependent, as they are, upon the continuation of their incomes.

An illustration of how necessary it is to exercise extreme care when making investments for women and estates is recalled in a distressing case that came to my attention as the outcome of the failure of the Third Avenue Railroad. An elderly woman was left 300 shares of the stock in this company when they were selling around $200 a share and when there was not even a breath of suspicion that anything could go wrong with this property. This stock represented an investment at the then market price of over $60,000 and was sufficient to give the woman an income of over $3,000 a year, enough to provide for all her necessary comforts. Overnight her fortune was swept away and her income vanished as the result of the failure of the company. In place of comfort for her declining years she saw poverty staring her in the face. She was finally prevailed to sell her stock for $30 a share, stock that cost $200, for she had no means with which to pay a large assessment, and on the interest she receives from her money in a strong savings bank, she is finding it hard to make both ends meet.

It would have been far better for this woman to have had her $60,000 invested in government bonds even though they would have brought her an income of only $1,200 a year.

I cite this case to clearly point out that the smallest risk can quickly become the greatest risk. Such bonds as construction bonds, mining bonds, collateral bonds, unsecured debenture bonds and notes, or for that matter any bonds unless properly secured by physical assets, belong to investments that cannot be safely recommended to dependent women or estates. In saying this, there is no intention to reflect upon the desirable securities of this class, of which there are many, but to emphasize the advisability of minimizing all risks.

Security for such investors is the foremost consideration. Income is secondary. The undoing of most of these investors directly results from a desire to increase the income at the expense of safety.

In the selection of investments for women and estates the suggestion is made that the same rules be applied as govern the investments of savings banks in Massachusetts, New York, Connecticut, Illinois, Ohio, Pennsylvania and other states. These laws are the combined result of the most careful study in determining the safest character of investments.

Copies of these laws may be easily secured by writing to the secretary of state of each of the respective states.

XIX. THE MARKET FOR BONDS.

Much discussion has arisen over the question as to whether a bond is in a stronger position as an investment if it has a quick market or not. It cannot be denied that marketability has certain advantages, but on the other side of the question, there is also the indisputable argument that the broader a market for a bond, the less income it brings. This question is one largely decided by the needs of the investor. If he desires a permanent investment, one which it is his intention to hold until maturity, the question of a market is not of prime importance. The question is important, however, for those investors and banking institutions forced to realize quickly upon their securities in order to obtain funds.

If a market were the essential requirement for all investments, many inactive bonds would be excluded from consideration, even though from a point of absolute security, they are sometimes far safer than some bonds which may be sold readily at any moment they are offered. To a large extent would this be true of real estate and farm mortgages, which are excellent investments and are purchased to hold until they fall due. Nor is a quick market the most desirable for timid investors. A general decline in the security markets which may have no bearing at all upon investment values might harass these timid souls through their fears to sacrifice their securities when there is no warrant for it.

Fear cannot be reasoned with intelligently. No panic ever takes place in which there is not also witnessed a wholesale slaughter of frantic investors, who, a few months later, keenly regret that their fears made them throw their securities on the market. It is because of this that I say that

an active market is not essential to the permanent investor. If the bonds he holds are those of a solvent corporation and sufficiently secured, a decline in the market price below what the security cost him, does not impair his investment. It must be paid one hundred cents on the dollar when due. In the meanwhile, market fluctuations cannot interfere with the continuation of the income.

It is security that is most desirable, not a market, nor should investors be influenced seriously by the theoretical discussion about the increased production of gold reducing the purchasing power of gold, which may affect the income of an investor in making the return go less further than before, for the income is fixed. We are now in this year of 1911 passing through a period of liquidation which is again bringing to a lower scale the cost of living, by the decline in commodities. All such discussions are more or less theoretical.

XX. THE CHARACTER OF AN ENTERPRISE.

Over one hundred million dollars annually are engulfed in the whirlpool of predatory finance. This is the amount one conservative estimate places as the tribute paid each year by credulous investors to the modernized American confidence man who has deserted gold bricks and green goods for the more inviting opportunities offered in selling worthless shares.

It is difficult to explain how it is that a people, normally intelligent as a class, permit themselves to be victimized each year out of such an enormous toll. Greed alone is not responsible for their credulity. A more logical reason is to be found in the great ignorance shown by the average investor of the character of securities. The majority act upon the assumption that everything is right without first investigating. They rest their faith in the honesty of the men who are asking them to invest their money. They assume that the public authorities would never permit these men to carry on their business were they aware beforehand of their dishonesty and that the powerful newspaper press would never allow them to use their pages to advertise their securities unless their backers were honest.

Unfortunately the authorities proceed upon the theory that it is none of their business to act upon the initiative or that they suspect a fraud is being perpetrated. They contend that more pressing duties occupy their time and they cannot afford to investigate all the investment propositions as soon as they make their appearance. They, therefore, wait until a complaint is lodged with them before bestirring themselves and in most cases a swindle has by that time gone too far and already the greater part of the mischief has been perpetrated by the time some victim has become sus-

picious enough to lodge a complaint. As far as some of our powerful newspapers are concerned, it is unfortunate that their morality is no more than a cold business morality. Some of their publishers maintain that their readers must exercise their own intelligence about the investments offered in the advertising columns. They say they do not recommend them. They require and desire the large revenue derived from illegitimate financial advertising, running into the thousands every year, and are perfectly willing to salve their consciences by assuming an innocence of knowledge as to the real character of the proposition offered.

A prominent government official has severely arraigned the newspapers which accept this class of advertising for their share of the guilt in the annual loot which the dishonest investment proposition takes from the public. He has charged that these swindles could not exist without the co-operation of these newspapers. But this is not all true. The liberty to use the mails for the distribution of prospectuses, literature and letters is equally responsible for their existence and success. If the newspapers were not as accessible as they are these schemes would still be carried on through the mails.

If it were possible, without encroaching upon the liberty of the press and the use of the mails, to bring about an intelligent co-operation between the newspapers and the postal authorities to surround investment propositions with proper restrictions, there can be no question but that the harm they do could be materially curbed. Even then unsuspecting and uninquiring investors cannot be wholly protected against their own ignorance. There is but one way for them to guard themselves against outright swindles and this is by the exercise of a little common intelligence.

The brief investigation before investing will, in the majority of instances, save the investor his money. But the usual practice is to invest first and investigate afterwards. At least my experience in my correspondence with invest-

ors who have bought doubtful securities, shows this to be the tendency. I purpose here to outline some of the essential factors relating to every enterprise about which investors should fully post themselves. If they follow the course laid down, there is little chance of any swindles getting their money.

The Nature of the Enterprise.

It is important to consider seriously the nature of the enterprise. If its basis is sound, the prospect is good for its success under a capable management. This may be determined by a comparison with undertakings of a similar character, by which it can be shown if they are profitable elsewhere. Competition is also an important factor to consider. What sort of competition will be met with and what degree of opposition must be faced? Has the enterprise peculiar advantages over others in a similar line? This should be brought out, as well as all the advantages indicating that the enterprise can be profitably conducted under existing conditions. These are the general problems to which investors would do well to give the first serious thought.

When satisfied in this regard, the next step is a careful examination of the plan of organization. Corporation laws differ. Some states are more liberal than others, some states even going so far as to invite the incorporation of enterprises by loose laws, none of which is for the benefit of the stockholders.

The corporation laws of Maine, Delaware, New Jersey, North Dakota and Arizona are all so framed as to vest the management of a corporation with such discretionary power and secrecy that it works the greatest harm to the stockholders. The stricter the laws under which an enterprise is incorporated the greater are the interests of the stockholders safeguarded. The amount of capital is very important. The more reasonable, the greater are the chances

of success. No less important is the manner of the issuance of the stocks. Has it been issued in whole or in part in return for the property turned over by the incorporators? If so, in what proportion and for what property? A knowledge of this will throw some light upon whether the money of investors will be used for the exploitation of the business of the enterprise or flow into the pockets of the promoters.

Is the stock offered for sale full paid and non-assessable? It is the law of some states that stock bought for less than its par value places on shareholders the liability for the difference in case of insolvency. Suit can be started by the creditors for the recovery of the difference. Corporations evade this statute by turning over the assets for the shares, in this manner making them full paid and non-assessable. Part of this stock, if not the whole, is then put into the treasury to be sold to secure working capital. It should also be determined whether any of the stock has preference and of what this preference consists. Foreknowledge in this respect is to be fore-warned against any surprises. By knowing what, if any, stock remains unissued and is held in the treasury, one may tell the sources of new revenue open to the corporation, as new capital can be raised as it is needed by the growth of the business. A copy of the by-laws should be examined carefully, as from them the prospective shareholder can determine the extent of the powers vested in the officers and directors of the corporation.

Who has the stock control? The character of the men is such that it can either make or break a corporation. In their hands rest the rights of the smaller stockholders. Are they men whose past conduct in the management of corporations is such as to assure that the rights of the minority shareholders will be fully maintained? Finally, in the plan of organization are there any unusual features in the charters of the by-laws which may be employed in the future to the detriment of the stockholders?

Present Condition of the Enterprise.

An examination in this respect can be divided into three classifications: First, into the property; second, into operation; and third, into the finance.

To begin with the first, there is the property or the rights controlled. Herein are the elements of success. Has it any value and how have the values been estimated? The answer to this inquiry can determine the measure of conservatism or exaggeration back of the enterprise.

If the properties or rights are owned outright the more certain the foundation on which the enterprise is being built. Less assured is the future where the properties are held under lease, license, grant, option or otherwise, for the failure to comply with some terms is liable to break the contract and the loss of the property. If the property is owned outright, the titles should be perfect. If there are any encumbrances on the properties or rights, the investor should know it, and what the amount is. If they are not owned outright, the holding papers should be in proper form and it ought to be known also if the holding terms are reasonable, satisfactory and safe.

With all the facts known, then some ideas ought to be formed as to what the property is likely to bring in case liquidation is forced, and with all these facts before the investor, he can form an intelligent conclusion regarding the present condition of the enterprise.

Coming to the second consideration as to operation, the first thing which should be found out is: What have been the operations up to the time the investor is asked to purchase the shares? Then, what have been the results and to what extent have they proved profitable? Another fact to ascertain is whether difficulties have been encountered, and, if any, their nature. Find out about the demand for the product or the operation of the enterprise and what is its present status financially, as well as physically. Then, are

the books properly kept and are they open to the inspection of the shareholders?

The third consideration, and one which relates to the very heart of an enterprise, is the state of the finances. First, there are the assets as they exist—their character and their actual value. At least an investigation of the assets will guard against a later discovery that they are mostly of paper value and not real. It is important to have a clear knowledge regarding the debts, claims, fees, rents, royalties or other payments or obligations due and which must be met.

Knowing this, the next step is to ascertain the resources available, out of which these debts are to be paid. Who handles the money and what safeguards are provided to prevent improper disbursements? It is also important to know what, at present, the running expenses are and what they are likely to be, including the salaries of the officers and managers, to ascertain whether these important outlays are upon a conservative basis.

Then there are the directors. Who are they? What is the past record and present business standing of each? Who are the active members of the board? Who, if any, are inactive? Are the meetings held regularly and are they fully attended? Who compose the executive committee, if any, and what are their powers? Above all it should be ascertained if the directors are stockholders to a material amount. It is but reasonable to suppose that if they are financially interested in the prosperity of a corporation, the more conservative will their management be.

Who are the officers? What are their previous records? What are their special present qualifications? Are they able to work together without friction? What compensation do they receive or are they to receive, and are they interested in the enterprise beyond their salaries? What is the general plan of operations they have mapped out for themselves and what led to their adoption?

Some General Questions.

With a clear intelligence regarding the above problems, there still remain some general features which should be thoroughly investigated. Serious consideration should be accorded to the previous history of the enterprise or the property or undertakings on which it is based. If inventions enter prominently, what is the previous record of the inventor? By whom are the statements made, and is the party making them reliable? Finally, are there any contracts or obligations not now effective by which the enterprise may subsequently be effected?

With all these facts before the investor and carefully considered, he is at least assured against falling a prey to any financial sharps. Neither they nor their enterprises could furnish a clean bill of health where probed by an examination as thorough as assured by the different questions outlined in this section. While they are by no means a complete assurance against loss, as an honest enterprise might meet with difficulties and many have, they do raise sufficient safeguards against downright dishonesty. In conclusion, it may be said that the investor should demand before parting with a penny of his money, a complete financial statement, including item by item the assets and the liabilities, the earnings and the expenses, of a going concern. In another section, a specimen statement is submitted to demonstrate how figures sometime can be made to lie in a way to do credit to a Baron Munchausen.

If investors will conduct an investigation such as has been here proposed, there will be very few who will, by the exercise of a little bit of intelligence, have cause to complain that they have been victimized. They will have locked the stable door before the horse has been stolen.

Swindlers operating in the financial field are unable to reply properly to all these questions and even should they, their answers would not hold together well. Discrepancies

would show themselves here and there so glaringly as to at once eliminate their proposition from the consideration of intelligent investors.

It is possible to deceive a person with one lie, but a half dozen or more lies will not stick together. In fact, conservative bankers employ this searching investigation to determine to their satisfaction, the character and possibilities of an enterprise proposed to them to underwrite its securities. If they depend upon this information, why should not investors?

XXI. SCIENCE OF SPECULATION.

Call it what you will, speculation will always be with us. Prudes may frown upon it, superficial thinkers may confuse it with the commonest forms of gambling, and sociologists may dream of the day when envy, ambition and covetousness will be a thing of the past and the human race can exist in peace without these human traits, but their agitations and outcries can no more check speculation than human ingenuity can devise a scheme to control the tides.

What the blood is to the human body, speculation is to business. It is absolutely a necessary part of it. The only difference, if there is at all a difference, is in the form it assumes. What would business be without incentive? In fact incentive is all there is at the bottom of speculation. Men are willing to take risks to acquire wealth. They are willing to stake their capital upon opportunities which appeal to their judgment.

From the pioneer who heedlessly plunges into a trackless waste to find a new home with greater opportunities for the acquisition of wealth, to the modern capitalist, who, to control the trade in a given commodity, plans gigantic trusts, is a long line of speculators, as speculation is behind all their ambitions. The inventor who is, apparently, of all men the least of speculators, takes greatest speculative chances, for he uses up time and energy to shape his ideas into some form where they can be of practical use and should he fail has wasted them utterly and lost all.

Illustration after illustration could be given to demonstrate how speculation in a greater of less degree enters into the material welfare of each individual.

Without speculation no business could progress. It is the dynamic power behind every incentive to activity and

progress. It is the desire for gain which prompts the inception of every venture. If it is all that, then it can be readily seen how necessary speculation is. In fact, speculation in its highest form has shaped the course of history and often changed the map of the world.

While the discovery of America by Columbus was accidental, the real purpose behind his venturesome journey was to find a shorter route to India. After he found a new hemisphere his discovery inflamed the spirit of conquest among numerous intrepid explorers, few of whom set out upon their expeditions with any thought of planting their country's standard over new territory for the mere sake of fame. Most all of them went hunting for new treasures and to expand the commerce of their nations. Cortez was only a looter. He and his soldiers despoiled Montezuma and the Incas of their treasure for his king, himself and his men. Pizarro did the same. The Indians, our real Americans, were not originally blood-thirsty savages, but a peaceable race of primitive men who welcomed the appearance of the white men among them. Their friendship was only turned into hate when they began to realize that the white man came among them solely to wrest their land and possessions from them.

Behind most wars among nations there is the commercial instinct. This is but another form of speculation, except on its grandest scale. Instead of between individuals it is between nations that a rivalry for acquisition exists and this rivalry clashes to a point where it arouses the martial spirit of a race to acquire by force of arms what cannot be secured by peaceful measures.

Were it not for the rich diamond mines at Kimberly and the gold mines of Johannesburg in South Africa, there never would have been such a historical event as the Boer War. It was not an insult upon English pride which prompted John Bull to spend over a billion dollars to humble the hardy dutch nation under Krueger, but the posses-

sion of the rich mines was the real goal. But once the conflict was on, national pride forced the English nation to carry it to a victorious end, whatever the cost. The same cause, the retention of India under the British flag, brought about the Sepoy mutiny.

Going back further into the history of England, the loss of her American colonies is directly traceable to the greed of her capitalists. Out of their enlarged opportunities they wanted to get all their was possible despite the danger of trespassing by their heavy exactions upon the peaceable nature of the colonists. The tea tax was the spark which set aflame the American revolution.

No tax can be construed as a patriotic measure. It is a scheme for material aggrandizement. George III, to enrich the exchequer of his nation and indirectly the personal fortunes of his subjects, attempted to do it by forcing the colony in America to pay his country a greater tribute. For his efforts to lay hands on more money, England lost an important colony. What, then, was this war, when stripped of all its romanticism, but the result of speculation? It was a case of a nation's greed overstepping itself.

And so it was in the late war between Japan and Russia. Patriotism and national pride had no share in bringing about this conflict. Rich Manchuria and the possession of Corea, which also meant the dominance over the commerce of China, were at the bottom of the conflict. Japan wanted this enormous business. Russia was equally covetous. It was therefore inevitable that the friction between the two nations, wholly the outcome of their commercial expansion, could be settled only by war and the prize fall to the victor after sacrificing many hundred thousands of lives and piling up a huge war debt for each as a heritage for many future generations.

What is true of nations is also true of individuals. They seek greater opportunities to make money. Between individuals their interests when they conflict are fought out

in the arena of competition. The mastery falls to those who are the shrewder and more aggressive contenders. Yet beneath the outward semblance of competition is the greater force—speculation. We cannot get away from it. Wherever we turn we are brought face to face with it.

By no means, either, is speculation in any sense a modern force. It is as old as the human race. Only when the human race no longer exists will speculation become extinct.

Our own Bible brings down to us the tradition of how Joseph bought up all the wheat in Egypt because he shrewdly detected there would be a famine in the land. What was this but speculation? In reality Joseph was the first man we know of to corner wheat. Nowadays men speculate in the same cereal. They watch the weather map carefully and spend considerable money each year gathering statistics in an endeavor to form an idea as to the extent of the harvest. As they form their opinions they trade in the wheat long before it is out of the ground and ready for the market. They buy if they believe the crop will fall short, to resell it later at a higher market price, or if, on the other hand, they arrive at the conclusion that the crop will be plentiful, they sell it in anticipation of a decline in the price expecting to reimburse themselves from the difference in the price they agreed to deliver it for months previous to the harvest and the lower price. If they are mistaken in their judgment, they, of course, are out of pocket. The only difference between their trading and that of Joseph is that whereas he bought the wheat outright, they deal in contracts without ever seeing the cereal.

Guglielmo Ferraro, the great modern Italian historian, in his fascinating history of "The Greatness and Decline of Rome," gives a very interesting account of how speculation was at the very bottom of most of the conquests of the Roman legionaries over the other barbaric nations and to many it may be exceedingly interesting to know that for nearly a century before the birth of Christ, the Romans were

already buying shares in large land operations which were carried on throughout the colonies of Rome. So even the buying of shares, regarded as a modern evolution, is by no means new.

Lucullus, Rome's first great expansionist, inaugurated the fashion. His conquest of Mithridates first opened the eyes of the Romans to the luxuries and refinement of the East. The talents and sesterces he brought back to Rome incited in the Roman aristocracy the lust for greater conquest. The rich money lenders were prompted to finance the expeditions and the ambitions of the Roman war lords. Pompey conquered other nations, turning over their rich lands to the powerful Italian land operators, who in turn invited the smaller speculators to join them in their extensive operations. Caesar continued Rome's policy of conquest in Gaul and Britain. Behind all his wars was the sordid object of enriching himself and his followers with the tributes exacted from the smaller and weaker tribes which his legions subdued—all for one object, to extend the wealth of Rome, to give the speculators a greater field for their operations.

Thus it is seen that we have many historical precedents to justify speculation. More than this, they indicate that behind each step of progress the human race has made, speculation has been the impelling force and modern conditions have changed it but slightly.

What, however, is the science of speculation? We often hear of this appellation being applied to it. Roughly speaking, to me there does not seem to be anything like a science of speculation, in the sense that we are accustomed to use the term, beyond a few general though uncertain rules. There is a science of chemistry. The knowledge gained of it can be verified by exact observation. Certain conclusions can be demonstrated beyond peradventure by obtaining the exact result which an investigator sets out to obtain. There is an exact science in astronomy, in medical research, in

geometry, in meteorology, and in metaphysics. Knowledge of laws and rules must first be acquired to prepare a person to undertake proficiently the study in these sciences.

But I should like to ask how any course of study in speculation could be outlined on which reliance can be placed. Familiarity with the objects engaging one's speculative instincts of course are absolutely essential to success. A general knowledge of conditions helps considerably when coupled with a keen perception of what their effects are likely to be, but as these conditions constantly vary, there is no way by which a knowledge of them can be verified by exact observation.

Possibly you have seen at some time or another, a chart indicating the trend of the stock or grain markets. A piece of paper squared off in blocks, each row representing a cycle of time, most usually a year, and across these blocks there will be a wavy line running either longitudinally or perpendicularly. This line is supposed to trace the trend of prices. Such charts have many followers who foolishly believe they can replace judgment with a greater degree of accuracy. But they more frequently go wrong than they prove right. They might be accurate guides were similar conditions present, when the charts would indicate a recurrence in a swing in prices upward or downward as the case might be, but this is not always the case, fate having a strange inconsistency in bringing forward unexpected events which wholly change the course of human expectations.

Previous to the sharp panic of 1907 the concensus of opinion among our great millionaires who accumulated their vast wealth as a result of the unusual period of prosperity which set in with the election of William McKinley as President, was that the country had not yet exhausted the good times. Shrewd men like Henry H. Rogers, William A. Rockefeller and others equally powerful, were confirmed bulls on the country and backed their faith of much

higher prices for the leading securities listed on the New York Stock Exchange by accumulating vast blocks of shares.

According to the signs of the charts, their position was correct. The flood tide in the prices of stocks had not been reached. But without a visible sign of a lowering cloud in the business horizon, a fatality occurred which rent asunder all their well-laid plans and involved them in huge losses. The panic of 1907 came unheralded by any of those advance signs which in the ordinary course of events cast their shadows before the eyes of shrewd students of conditions.

That fatality was the San Francisco earthquake. It came like a bolt from a clear sky. The destruction of over $200,000,000 of actual wealth proved like a vacuum bursting, in which money required elsewhere had to rush in, to mitigate human suffering and prevent the total ruin of fortunes invested in the stricken city. It found the credit structure of the moneyed centers in the country in a vulnerable position. No money in large volume could readily be spared within so short notice without withdrawal from other channels and as the necessity was most urgent, sacrifice had to be made by letting go of the more quickly saleable assets, which were securities. The earthquake caused the panic; that was unexpected.

Another indication that there is no accuracy to speculation is the explosion of the theory regarding the recurrence of panics. For some years we have held to the belief that between panics an interval of about twenty years elapses. But of late, money panics have occurred with greater frequency. From 1900 to 1910 there were two panics, varying in degree of intensity.

If it were at all possible to gauge accurately beforehand the years in which we are to see great prosperity and then adversity, there would be hardly any necessity for the exercise of the keener perception upon which successful spec-

ulation must depend for a profitable fruition. All that would be needed is to watch for the unfailing signs and then trim sails accordingly.

Another fallacy we often fall into, is the belief that a panic in Wall Street is a localized affair and cannot disturb the prosperity of the country. We have seen an impression extant something akin to this during 1907. Other parts of the country were confident they would not feel the effect and the press was particularly concerned in pointing editorially to reasons explaining and emphasizing this view. But it was not six months afterwards before the entire country was in the grip of the depression the panic superinduced. In a few months the banks in the large interior cities were forced, because of the scarcity of money, to resort to clearing-house certificates as a measure to relieve the stringency.

Money has its capital centers in each country. As money is the basis of credit and is also the life fluid of business, it cannot be otherwise than that the prosperity of a country will be disturbed and checked when there occurs a panic in the principal money centers. Then a condition of atrophy is brought about. Business receives a swift check, almost always unexpectedly and when least prepared for it.

Sometimes a panic is brought about by the most unusual occurrences. At times it comes by the most unexpected happenings and the direct cause will always be found in the over-extension of speculation.

One instance I have in mind was the sudden death of Governor Roswell P. Flower, who was a great market factor and who, because of his unusual success as a speculator, had behind him a great following in the securities in which it was known he was most largely interested. His death, overnight, paralyzed his following. They were thrown in a panic of fear by the sudden loss of their leader. What were imposing fortunes the day before were swept away as if by a tidal wave, and in place of the wealth there

was ruin, on the day following, to thousands of speculators, caused by the sheer and heartsickening decline in prices of securities.

Another similar case of the unexpected, but this time not from the death of a great financial captain, was the memorable flurry in Northern Pacific stock as a result of the Titanic struggle for control of this important railroad system between E. H. Harriman and his banking ally, the great banking house of Kuhn Loeb & Co., on one side, and James J. Hill, backed by no less a great banker than J. Pierpont Morgan, on the other, Northern Pacific shot up to $1,000 a share. Were it not for a private settlement on the price after peace was again restored between the two rival factions, the financial district would have been a mass of wreckage, since but little of the stock sold under contract to deliver next day was obtainable, as the control was held tightly by Hill and Morgan.

Jay Gould's efforts to corner gold, when gold in Wall Street was still considerable of a speculative commodity and there was a room in the Stock Exchange set aside for traders in it and known as the Gold Room, brought Black Friday, one of the blackest days in our financial annals.

These illustrations will confirm the contention I make that it is the unexpected which changes the course of speculation. It is the unexpected against which no precaution can be taken. To the lay mind it will be somewhat puzzling how the effect can be so ruinous. With a little clearer knowledge in the rough of how speculation is carried on it will be more readily understood.

Most speculators do not buy outright, that is, with their own money. They usually operate on margins. That is, they will buy a block of stock, it can be wheat, cotton or something else just as well, through a broker, paying a certain percentage of the purchase price and leaving it to the broker to arrange a loan with his bank for the balance. On this balance the speculator pays interest.

As the stock declines he is forced to protect his equity in the stock by putting up more money or margin, and if he has not the capital or comes to the conclusion that the decline will continue and does not care to run the risk of further loss, he sells out or is sold out, the bank liquidates its loan, the broker deducts his commission, and if there is anything left, the speculator gets the balance. If he is in debt beyond his margin he must make the difference good. But it seldom reaches this point, as the loans made are carefully watched and closed ere the lender's margin is exhausted.

In panics, or when the unexpected happens, the change in prices occurs so swiftly and suddenly that often the speculator has no time to protect himself before his loans are liquidated as a matter of precaution. As for the outright holders of securities, they are harassed by fear to unload to prevent further losses. In such times securities are recklessly thrown upon the market from all sides, and prices smash.

XXII. EFFORTS TO PREVENT SPECULATION.

There breaks forth periodically from prudish, but well-meaning people, protests against all forms of speculation in stocks or commodities. Appeals are made regularly to the legislative arm of the Government to put a stop to speculation through the enactment of repressive laws. These out-bursts of public temper usually arise out of a speculative debauch or directly result from abnormally high prices, which speculators are charged with bringing about.

These outcries are typical of restless human nature. The public as a whole sometimes acts as one big machine, permitting itself to be propelled unthinkingly hither and thither by some forceful leader or set of agitators who momentarily have caught the popular fancy. These risings are sometimes successful and laws to curb or wholly suppress speculation are framed.

Nor is this aroused state wholly a characteristic of the American people, who are, anyway, a cosmopolitan nation made up of many races. It breaks forth among the peoples of other nations. The Germans, stolid as they are, rebelled against the speculation in grain, claiming it enriched only the millers and placed a heavy burden upon consumers. A great outcry arose in Holland following the insane speculation in tulips centuries ago. England felt the clamor frequently and most pronouncedly after the collapse of the South Sea bubble, while France was rent with the protest of the populace against speculation twice, in a way to become historic: The first time, when John Law's grandiose Mississippi bubble burst, and the other, when the De Lesseps Panama Canal scheme smashed.

With us, a year hardly passes but that there is introduced either in Congress or in the assemblies of our dif-

ferent states, laws to stop margin-trading, as speculation in stocks is called, or dealing in options, either in grain or cotton. But up to the present time no laws have been enacted to interfere seriously with speculation. Our more sober intelligence has so far checked any attempt to construct bars against a practice which serious thinkers realize is the very incentive of our material progress.

Germany once succeeded in stopping speculation in grain. The farmers and the consumers soon felt, as a result, that the burden fell upon them and not upon the traders, who formerly dealt in this commodity on the Bourse. Without a public market on which a price for their grain could be made through free and open bartering, the farmers had to sell for any price they could get and never knew whether the price was standard. The millers had the price-making power for flour wholly within their control. It was not long before the Germans were equally as anxious for the restoration of trading in grain on the Bourse as they were a few years before to put it down by force of law.

The rise in public opinion against speculation has its counterpart in similar demonstrations against the liquor traffic and yet wherever the law has succeeded in driving liquor out of a community, statistics have proved the presence of a greater number of inebriates than when the traffic was allowed to be carried on in moderation and under the supervision of the authorities.

The minister of the gospel from his pulpit thunders against the evils of speculation with no less vigor than he portrays all the sins of the flesh for which Demon Drink is responsible. As they are popular themes they lend themselves readily to the eloquence of orators. Nor is this all: Blind ignorance, greed and rashness are responsible for many unfortunate victims of each of these twin evils in their eyes; therefore, they have many shining targets upon which to aim their shafts of invective.

But the deeper and more tolerant thinker peers beneath the superficial exterior and sees there a plausible and justifiable reason for the use of liquor. Wine and beer used in moderation never harmed a race. The Germans are no less virtuous than any other race because their favorite beverage is beer. The only difference is that their liking for this mild drink has been kept within the bounds of moderation. The corrective against the evils of intemperance lies in education in pointing out the harm which comes from over-indulgence. Laws cannot be relied upon to curb the appetite.

With speculation it is much the same. Intelligent speculation is no crime. It is not gambling. It is merely pitting human shrewdness against the uncertainties of the future. For that matter, life itself is a speculation in which ministers, prudes and agitators hope to avoid sickness and accident and live their allotted span of life. Between speculation and gambling there is as much difference as there is between night and day. Speculation commands the exercise of the greatest measure of acumen, where gambling trusts everything to luck and the turn of a card.

Experience has demonstrated far too convincingly that wherever speculation has been leashed by the iron bonds of the law, the effect has been almost an immediate stoppage in the material progress of the country. Market places where average prices are created are destroyed, which in itself is a great detriment, as the sellers cannot know whether or not the buyers are paying them a fair price for their products.

Almost Everyone Speculates.

A man believes that a corner store in his neighborhood is a good location for a dry goods business. He leases the store for a year or a term of years at a good rental. He contracts for a large bill of goods. He has his store substantially fitted out. In fact he has invested considerable

money in his enterprise and made himself liable to wholesale merchants for a stiff bill of goods, before he has even sold a paper of needles, all because he has arrived at the conclusion that the location he has selected for his business is favorable for the development of a good trade. No one would dare charge him with speculation. If any one did so, that man would be regarded as a hare-brained crank. Yet the storekeeper is speculating just as much as if he had bought so many shares of a stock whose earnings would justify the belief that there would be an enhancement in value. If people failed to patronize his store, and if sales were insufficient to bring a profit, he would have to suffer losses represented in the difference between what this stock brings and what it cost, and his loss of time and rent until he could rent the store to some one else before the expiration of his lease.

Fond parents, when they send their children to college to acquire an education to fit them for their struggle of existence, may not realize that when they invest their money upon the education of their loved ones, they are speculating upon the children's using the opportunity properly. Their boy or girl may absolutely waste the opportunity in frivolities and leave college even less fitted for life's battle than other young people whose parents' circumstances were such as to make it impossible for them to obtain a college education.

A tailor cannot tell when he is laying in a stock of woolens whether they will meet the public taste. He depends entirely upon his judgment when placing his orders, which he does months before the season has set in. Is he not speculating?

Why, even the grocer speculates when in the early morning he drives his wagon to the market for his daily supply of greens, vegetables and dairy products. So does the butcher in his trade. He figures that his regular patrons will order a certain supply of meat. He also knows that if

they fail to do so, what is left over must be made good out of his daily profits.

When the farmer tills his soil and puts it to seed in the spring, he speculates, does he not, on a favorable outcome of his harvest? Not only does he speculate but long before the time has been reached to garner the fruits of his season's toil, he has already pledged part of the harvest for loans at his bank, depending entirely upon his crops to take them up.

Human endeavor, whichever way it is directed, largely speculates upon a favorable outcome. The manufacturer invests considerable money in raw products to turn into finished articles, and in labor, counting upon a steady demand from consumers for his profits. If he needs money, he borrows from the bank, expecting to repay the loans from his sales. The wholesale merchant, whether he deals in dry goods, coal, groceries, jewelry or the dozen and one staple commodities, does the same and assumes the same risk, putting his judgment against the future.

In going into these minute details, I merely attempt to show what misconception exists regarding speculation. The critics take the shadow for the substance and hold the substance responsible for the evil effects of the shadow.

If a man fails in speculation and is ruined in consequence, he is pitied and speculation pilloried before public opinion as a crime.

If he fails in business as a result of misjudging his opportunities, he is not pitied, but condemned as an incapable business man, although underlying both misfortunes there must have been the same cause, a greed to bite off more than could be cared for, or greed to acquire a fortune quickly, even at the risk of rashness.

There are any number of people who buy real estate or farm lands every year, knowing full well they have not the money to purchase it outright. They make their purchases subject to the encumbrances or mortgages already

standing against the property. What money they pay out is for the equity and nothing else. They are confident of their ability to care for the interest on the mortgages. They expect their equity to increase in value sufficiently to enable them to turn over their property to some other buyer at a good profit.

Even the more humble wage worker does this when he buys his home on the installment plan from a builder, who himself, to construct the house, has already plastered it with a mortgage to his bank, and the interest on which mortgage the wage-earner must pay in addition to paying off the equity in easy installments.

In each instance, the buyer is buying on a margin exactly in a similar manner as he would buy on margin certain stocks or certain quantities of grain or cotton. Some one else lends him the money on the unpaid balance on which he pays interest. Yet some people hold this practice to be wrong, to be gambling, while they hold the purchase of real estate on part payment and financing the remainder by a loan as a legal and ethical transaction. If the one be wrong, the other is also.

Moreover, there are as many failures through over-extension in real estate operations as in stock speculation. As many people have their property sold through foreclosure, because of their inability to meet their interest, as there are people who have their speculative commitments in stocks closed out through inability to provide more margin.

The evil in speculation is not in speculation itself. Where it arises most is through ignorance of conditions. Unscrupulous brokers and mercenary "tipsters" are to a large degree responsible for the odium so frequently heaped upon speculation. They tempt people into the whirlpool, where the most acute judgment must be exercised. These people have no knowledge of the principles of speculation, but the operator drags them in by appealing to their greed and cupidity. They are told about what great fortunes are

made on a few hundreds or thousands. They are induced to so over-extend themselves that the movement in their speculation of a few points against them completely wipes them out. The most festering sores on speculation have been the bucket-shops. Their gain lies in the losses suffered by their patrons. The more they can shake out, the greater the profits; therefore, it was at all times to their interest to tempt their customers to operate on slim margins. Fortunately, these concerns, which were no more than gambling shops, as they very seldom bought securities outright and in which speculation was reduced to guessing on the day to day fluctuations and not infrequently from hour to hour, have now been driven out of business by most of the states. Of late the United States Government has also taken a hand in extinguishing them, as it can do since their existence depends upon transacting most of their business through the mails.

However, equally mendacious is the "tipster," the advertising tipster who brazenly proclaims in large type that he is in a position to tell beforehand certain movements in securities. These charlatans succeed in garnering a harvest of ignorant and greedy victims who, with a childlike faith, swallow their statements in absolute confidence, and plunge blindly into buying the stocks recommended to them as going to jump many points, only in the end to lose all their money. It is paradoxical that some people will believe such stories coming from strangers, but when it comes to business transactions with which they are familiar, they are as shrewd in their bartering as the chief character in "David Harum."

If the average person would only pause to think that if these tipsters were so certain of success even in a tithe of their supposed information, they could make in a night a fortune large enough to place them above want for the rest of their natural lives and beyond all necessity of retailing their information for the twenty or ten dollars they succeed

in cajoling from trusting, ambitious persons who strive to get rich hurriedly on inside information, most of which is purely guess work.

Yet these Cagliostros of the financial centers have contributed largely to the disrepute speculation occasionally falls to in this country, due to the laxity of the authorities, who, it seems, might find some way to drive them out of business.

There are also the so-called financial geniuses who have devised a system of reducing speculation to an accurate science, who by charts or other devices, claim they can accurately gauge the fluctuation in prices so that there is no risk whatever. Scheme after scheme of this character has been launched, each one finding some following, at times large, at other times but a beggar's guard of embryonic speculators. Some have been put forth by sincere fools; others by outright crooks who know only too well how to attune their plans to the credulity of the public. But none ever succeed. One by one they go to pieces, leaving in their wake a train of victims.

Speculation cannot be harnessed to comply with any man-made laws. Keen insight into conditions, a thorough familiarity with the earnings of certain properties, or the condition of the crops, if this is the commodity in which a speculation is concerned, and a clear knowledge of the tendencies and trend, are abilities making for successful speculation, and they are individualistic, not mechanical. A person might as well try to break the Bank of Monte Carlo on a system or any other game of chance as to attempt to reduce speculation to a science.

It cannot be done, for there are too many elements of uncertainty. Life itself consists of uncertainties. Withal, intelligent speculation is absolutely necessary to the material progress of a nation. Risks must be taken to make headway in business as well as in the purchase of securities or commodities.

The country as a whole has spent all the proceeds of a harvest in anticipation of it, long before it gets to the markets, and immediately starts upon contracting liabilities, expecting to meet them out of the next harvest. When it overdoes this and is disappointed, the country pays the penalty by a business depression. We discount the future, and in doing so, speculation plays the largest part. It is impossible to deny this fact.

None of our railroads, nor any of our largest corporations could have ever attained their prominence or magnitude were there not an army of optimists confident of their growth, willing to take chances in the enhancement of the value of their securities when they were low. Where would these properties have raised their necessary capital without these speculators?

And when we consider that, as a result, many millions of persons find employment, we can see one of the great benefits arising from speculation.

Speculation in itself is vitally necessary. Its abuses are what we should strive to control. Much of that can be done away with by the spread of intelligence regarding its operations.

XXIII. THE MYSTERY OF A BALANCE SHEET.

Corporations whose securities are largely in the hands of the public ought to furnish their shareholders a statement of their financial condition at least once a year. Accompanying this annual report there should be a statement of the earnings and disbursements during the year.

Shareholders have a right to know what the managers of their corporations are doing in a business way and how their properties are being managed by those chosen among them to officer and direct them.

Not all corporations, however, do this. Various reasons are given in explanation. Some claim that in making their affairs known they lay their trade secrets before competitors. Other corporations assert there is nothing to be gained by revealing their profits as long as the stockholders are receiving dividends regularly, but that such disclosures are likely to subject them to annoying inquisitions from tax gatherers. In answer to the first statement it is to be said that financial statements can be prepared so as not to reveal trade secrets. In answer to the second claim, no corporation ought to shirk paying its legitimate proportion of taxes.

Secrecy regarding financial operations has a bad effect upon confidence as it rightly should have. Unless a corporation is a strong one and has had an enviable financial reputation for years, the refusal to make its affairs known to the shareholders has the inevitable tendency to create the suspicion that not all is as well with it as the corporation would wish to have the shareholders believe.

As a matter of public policy, the National Government has made it compulsory for the railroads to make monthly reports of earnings and operating expenses to the Inter-

state Commerce Commission and while these reports still lack clarity in making them intelligible to most shareholders, they at least afford the opportunity to make intelligible comparisons. Some of the states make it also compulsory for the public service corporations to file their earnings for public inspection. But compulsion is far from satisfactory in supplying shareholders with information, as is the case when corporations recognize their rights and of their own accord willingly publish statements.

The majority of our corporations have come to recognize their obligations to their stockholders in this respect and at regular intervals issue earning statements and an annual report at least once a year. The great United States Steel Corporation even goes so far in recognizing the rights of its more than 200,000 stockholders as to publish at least once a month the tonnage in steel orders booked.

As far as the earnings and operating expenses are concerned, there can be little about them to confuse the intelligent stockholder. There can be no jockeying with these figures for any length of time without the fact becoming apparent very soon.

Where the lay mind, unfamiliar with the intricacies of bookkeeping is likely to be puzzled, is in the corporation's balance sheet which is supposed to give to the stockholders an accounting of its assets and liabilities. It is here that a good deal of educational work is necessary. The appraised value of a corporation's assets must be largely accepted upon faith. A large number of corporations, however, in an effort to convince shareholders regarding the authenticity of the appraisement of their financial condition go so far as to secure an independent audit by certified accountants, a method which has been very well received and can usually be relied upon.

But an independent audit is not always such as it should be. I have often seen certified statements of this character which would no more convince me that the balance sheet

submitted was conservative than had the corporations submitted the figures unvouched for. Some of these accountants simply certify that they have checked the different items on a corporation's book and have found them as represented. This, bluntly stated, merely means that they have accepted them as being correct without carefully going into the matter to determine whether there has been any inflation in appraising the assets with the purpose in view of establishing a strong financial showing.

To what an extent a financial statement can be made to falsify, I publish herewith a statement issued a few years ago by a wireless telegraph concern which had been engaged in the fraudulent exploitation of its shares until the Government stepped in and put a stop to the swindle. This is the statement:

ASSETS.

Patents and patent rights	$ 5,005,100.00
Stock in treasury (par)	5,310,410.00
Stocks and bonds in other companies—book value	14,128,610.00
Cash in treasury and treasury agents	109,400.70
Office furniture and fixtures	3,975.38
Factory material on hand	9,285.55
Factories and equipments	25,996.94
Bills and accounts receivable	176,498.08
Land stations and real estate	215,442.50
Boat stations	287,500.00
	$25,272,219.15

LIABILITIES.

Capital stock (authorized issue)	$20,000,000.00
Bills and accounts payable (current monthly)	15,556.37
Surplus	5,256,662.78
	$25,272,219.15

Here is a statement which superficially presents a very strong financial position. Taken on its face, it shows a book value for the shares which are of a par value of $10, of over $12.50, not including its speculative possibilities. On this flimsy financial statement the financial sharks who were operating this scheme succeeded in selling considerable stock for as high as $30 a share, or three times its par value. The par value is the value of the shares as printed on the

face of the certificate of stock. The very fact that so many people accepted this financial statement as representing the actual financial condition of the corporation, is sufficient proof in itself that very few investors look behind figures, although a great many things may be concealed there.

To an analytical mind the first glance at this statement would arouse at once a justifiable suspicion that there was a great deal of inflation contained in the security. Investigation would have revealed the fact that an abnormal valuation was placed on "patents and patent rights." Going further, the item of stocks and bonds in other companies was apparent on the face of it to be grossly exaggerated. If nothing else would suggest this conclusion, the statement "book value" would have done so, since a well-managed corporation whose affairs are conservatively conducted does not value securities owned in other corporations at their book value, but market or liquidatable value.

In this instance it happened that these stocks and bonds were all in defunct concerns taken over by this concern and which had little, if any, value. As for the value of the "land stations and real estate" and "boat stations," they were also arbitrarily appraised.

The result is that instead of there being a surplus of \$5,256,662.78 as indicated, there was a deficit after the inflation in "patents" of \$5,005,100.00, in "stock in the treasury" of \$5,310,410.00, and in "stocks and bonds in other companies" of \$14,128,610.00 had been deducted from the assets. Together these three items aggregated \$24,444,120.00. Deducting them from the assets left only \$840,099, if what can be considered actual physical value of the remaining items are accepted as represented. Placed side by side with the liabilities, there is then a deficit of \$19,184,457, instead of a surplus of \$5,256,662.78, a hopeless case of insolvency as the shareholders' stock is practically worthless.

The illustration serves to enlighten the readers of this book with respect to the possibilities that lie in juggling

figures in making up a financial statement where the work is in charge of unscrupulous people.

Such items in a financial statement as "good-will," "patent rights," "trade marks," etc., should never be included among the assets. In the first place, they are not tangible assets. There is no way by which a market value may be placed upon them. I do not assert that they have no worth at all, for in some instances they are quite valuable, but what that value is can only be determined when an offer is made for them.

The mere assumption on the part of the directors that they would not sell these assets except at the figures at which they have valued them in their statement, by no means makes them worth that much. They may never receive such an offer.

Such items should be carried as concealed assets. To use them for the purpose of striking a balance in a corporation's financial statement must arouse at once the belief in the intelligent investor's mind that their function is to perform the work of inflation, to make a better showing than really exists. What is more, under the cover of such assets, insolvency can be concealed, as the value of these assets may be correspondingly increased as the liabilities grow.

Creditors of a corporation, however, are very seldom deceived by these assets. They do not pay their bills. When the creditors cannot get their money promptly, it is not long before the corporation is thrown into bankruptcy. When this occurs the unsuspecting shareholders who have been going along unsuspiciously in the belief that their corporation was in a strong financial shape, are rudely awakened to the existence of a contrary state of affairs.

A financial wit once described the surplus item in a financial statement as a corporation's ash heap on which were thrown all the undesirable items which it was advisable to keep from too prying eyes. The description, how-

ever, is far-fetched. With reputable corporations the surplus stands for exactly what it means, the excess in assets over the liabilities. It is the reverse with corporations of the other type.

For a financial schemer concerned only in roping in credulous investors, juggling figures so as to get at a healthy surplus is the least difficult part of his work. In the financial statements which dishonest promotors concoct for their ventures, all of them manipulate the figures. Their main concern is in getting people to believe in their figures.

I am reminded of a case which occurred some years ago where a Get-Rich-Quick Wallingford succeeded in deceiving even some very shrewd bankers by including for a large amount among his assets the item "Government and other bonds," thereby establishing for his venture a robust surplus upon which he was able to secure quite a number of loans. This item included one government bond of the denomination of $1,000. All the other bonds were not worth the paper on which they were printed.

That a surplus at times is meaningless was demonstrated some years ago by the failure of the Baltimore & Ohio, which had been allowed by the younger generation of the founders of the property to run down. Up to the day of the failure the annual statement carried a surplus in excess of $36,000,000. But there was no surplus. The alleged surplus proved to be an item against which the railroad charged supposed equities and expenditures which were regarded as investments. The management was deceiving itself quite as much as it did the stockholders.

What I should regard an illuminating financial statement conservatively prepared is the following, recently submitted to its shareholders by one of the smaller electrical manufacturing companies:

ASSETS.

PLANT.

Lands, buildings, tools, patterns, equipment, etc., (less Reserve for Depreciation deducted $547,903.99) $1,348,366.70

PATENTS.				
Patents at cost (less depreciation deducted, $104,832.37)				25,000.00
STOCKS AND BONDS				24,021.42
MERCHANDISE.				
At factory—at shop cost			$665,230.24	
Consignment—at shop cost			64,800.20	
				730,030.44
CURRENT ASSETS.				
Accounts receivable		$766,407.80		
Less reserve for doubtful accounts		10,000.00		
			$756,407.80	
Bills receivable			31,539.14	
Cash			136,969.41	
				924,916.35
Total merchandise and current assets				1,654,946.79
Total				$3,052,334.91

CAPITAL AND LIABILITIES.

CAPITAL STOCK				$1,958,375.00
CURRENT LIABILITIES.				
Accounts payable			$ 22,398.57	
Notes payable			657,500.00	
				679,898.57
SURPLUS.				
Balance January 1, 1910			284,719.75	
Net profit from operation for the year 1910		$278,144.11		
Less interest paid	$ 44,300.02			
Less dividends paid	101,502.50	148,802.52	129,341.59	
Balance for December 31, 1910				414,061.34
Total				$3,052,334.91

This financial statement is as complete in essential information for the shareholders as the other and previous statement is lacking in it. In this statement the cost of patents is placed at a nominal sum, so small in fact as to show that their value about represents the actual outlay to secure the patents. The other item, "stocks and bonds," is also so small as to be insignificant. What makes the statement strong and carries the impression that the corporation has taken its stockholders wholly into its confidence, is the care taken to show everything as it actually is.

In England the shareholders take a greater interest in the affairs of their corporations. They do not do as many American shareholders do—leave it mostly to the officers and directors to represent them at their annual meetings through proxies. They come to the meetings in numbers prepared to heckle the chairman thoroughly regarding dif-

ferent items in the annual statement about which they have just cause for criticism.

If more heckling were done by the stockholders in this country at their annual meetings, more care would be exercised by the directors of our corporations to have their annual statements comprehensive. There would be less mysticism in connection with the different items. We have the habit of leaving such matters, as vital as they are, to others. Each item in a financial statement should be carefully scrutinized and when there is any doubt in the mind a courteous request to the secretary for more detailed facts should bring the desired information. Any effort at concealment is a reason to arouse your suspicion unless a satisfactory explanation is offered.

In late years in the capitalization of industrial corporations, the tendency has been to depart from our more conservative methods of basing the capital on physical assets, with a reasonable margin for future growth. Instead, the earning possibilities of a corporation are capitalized. If a corporation has indicated it can earn $100,000 a year, the capital is placed around $1,000,000, and so on, irrespective of its actual assets. Fundamentally this idea is wrong. It is at the bottom of our evil of stock-watering. It robs securities of book value and places them upon the intangible basis of earning power.

That this is true a simple illustration will prove by reducing stock to a partnership arrangement. One would hardly pay for a half-interest in a partnership $100,000 because of the fact that the business was making $20,000 a year which divided between two partners would reduce the revenue for each to $10,000, or 10 per cent. There are too many contingencies likely to arise that would reduce the revenue to a much smaller sum. Yet it is on this very idea that some of our captains of industry base their capital for their ventures.

XXIV. THE FUNCTION OF EXCHANGES.

More than a hundred years ago a small group of men sat in a building located in what is now the heart of New York's financial district and organized an Exchange. Their object was the common one of meeting daily to deal in the few securities for which at the time there was a market.

New York, then, although even thus early the financial capital of the struggling young country, was still a small city, not much larger in population than that of Albany today. But it already had a number of thriving banks and small industries in which its wealthy citizens were financially interested and it was the idea to provide a convenient place where these stocks could be bought and sold that was responsible for the establishment of the Exchange.

The founders of the Exchange, which still exists as the New York Stock Exchange, desired their organization to be an exclusive one. Therefore instead of publicly incorporating their association under the laws of the state, they formed a club whose object was to bring the members together for commercial, instead of social, intercourse.

As a club the members could of course arbitrarily control its policy. They could decide without any outside interference who might join their organization. This rule still prevails. While the members are free to sell their membership, the Stock Exchange, or club, as it really is, retains complete jurisdiction over the membership. The Exchange can accept or reject the application for membership of any purchaser of a seat.

A seat on the Stock Exchange is what a membership is called. It is a figurative expression, as there are no chairs on the floor of the Exchange. There is too much activity to permit trading in securities in such leisurely fashion. The

term, however, has been handed down from the early days of the Stock Exchange when the business transacted was of limited volume. There were then chairs in the little room in which the members gathered, in which they could lounge while the secretary read the offers and bids the members of the organization made and upon which they governed their dealings between themselves. Such calls were made but once a day. From that practice the term "a seat on the Stock Exchange" originated.

Yet, the Stock Exchange, or for that matter any of our other exchanges, are not original with us, or are their functions vastly different from those of the exchanges in other countries. Primarily they sprung into existence in response to the urgent demand for a central clearing-house for securities or commodities in which the public is vitally interested. Our New York Stock Exchange is closely patterned after the London Stock Exchange. Our grain and cotton exchanges have for their models the leading exchanges on the other side dealing in similar commodities.

It is equally true in this country, as it is abroad, that the leading exchanges are a law unto themselves. Their functions are of such vastly important character that the slightest disturbance to their subtle influence is at once felt even to the most extreme ends of our commercial sphere of operation.

Politically the center of a nation's power is at its capital. Commercially, though, it is at the moneyed center of the country and it is here also that the most powerful and influential exchanges will be found. In the United States, New York City is the moneyed capital of the country; in Canada, Montreal; in England, London; in Germany, Berlin; in France, Paris; in Australia, Vienna; and in Holland, Amsterdam.

We little realize, and much less appreciate, how absolutely essential to our material progress are our exchanges. While it may be true that we possibly could get along with-

out them, it is nevertheless a truism that without them our commercial advancement would proceed at a snail's pace. Simmered down to its last analysis, the principal function of exchanges is to provide a central market. They serve as a place for quick transactions. They make it possible to barter in securities or commodities in seconds, whereas without their existence it could not be done in a day's time, sometimes longer, for the sellers would be forced to go hunting for buyers and even when they finally got together it would still be a question between them whether the prices agreed upon were fair.

Time and distance is a great factor. The founders of our Stock Exchange desired to save the one and cut down the other when they organized the Exchange over a century ago, and in doing this they were but following a natural impulse. They were merely complying with the dictates of economic laws which make themselves felt in every nation, whether its native tongue be English, German, Italian or French.

While primarily the object of an exchange is to provide convenience in trading, it exercises other functions of no less importance. Besides bringing traders together, exchanges also exert a strong tendency towards an equilibrium in prices. That is to say, by gathering about them a large community interested in certain securities for which they are the central market, there quite naturally follows free and unrestrained bidding and offering, through which is established, in accordance with prevailing conditions, a greater stability to values. Their price-making function, as determined by the dealings transacted between their members, furnished the banking interests of the country a fair index as to the extent loans may safely be made upon securities. Herein alone is a function of an exchange of inestimable value.

Another function of an exchange is that of acting as barometers of trade. They anticipate the ebb and flow of

prosperity long before the changes make themselves felt upon the surface of business. In times of panic they act as a bulwark of strength even in face of the ruthless slaughter in prices, for we could imagine what might possibly occur in the form of demoralization if there were no place where securities could be readily sold when demands for ready capital press a community.

I am now discussing generally the functions of exchanges and not dealing with the character of their operations. I am attempting to show how they fulfill one of the principal necessities to our economic well-being—to prove how utterly foolish it would be to make any attempt to legislate them out of existence. Controlled they should be, but only in so far as to compel them to properly exercise their functions. Beyond that they ought not to be disturbed. Any legislative restriction aiming at their extinction is but a blow at the foundations of a nation's progress and prosperity.

A seat on the New York Stock Exchange has sold close to \$100,000. It has been some years since the value of a seat has been as low as \$50,000. We have here, figuratively speaking, some idea of its importance. It shows that a membership is an exceedingly valuable privilege and, as the country grows older and wealthier, it is likely to increase in value.

The popular impression is that what makes the seats on the Exchange so valuable is the limited membership. This is more or less a fallacy. There are other exchanges in New York City, a smaller stock exchange and a produce exchange; the membership of each of these exchanges is also limited. Yet the privilege or entree to their floors can be had for a nominal sum—a bagatelle compared to the price of a Stock Exchange seat. The vast amount of business transacted every year on the Stock Exchange alone is responsible for the high price the seats bring.

To belong to the London Stock Exchange costs more than a seat on our Exchange for the London Exchange does

even a much larger business. In France, however, where the Government controls the Bourse and limits the membership to a select few, the privilege is exceedingly valuable, a recent estimate making a membership worth as high as one million dollars.

Still it is not to be wondered at that men are to be found willing to pay such large sums of money to exercise these privileges. Often in single active sessions on our Stock Exchange as many as 2,000,000 shares of stock are dealt in and there have been sessions when the totals have reached as high as 3,000,000 shares and this does not include at all, the transactions in bonds which reach large proportions.

What this means in dollars and cents may best be illustrated by a short example in figures. The unit of trading on the Stock Exchange is $100, so that, if a stock has a par value of only $50 each, 100 shares reported in the transactions really stands for 200 shares of stock. To make plainer this unit of trading, I call attention to such stocks as Reading, Lehigh Valley, Pennsylvania and Westinghouse Electric. Although traded in on the basis of a $100 par value, these stocks are issued only at $50 par value and are called on the Stock Exchange half-shares. If a person were to purchase 100 shares of any one of these stocks on the Stock Exchange unit, he would be really buying only 50 shares.

Now, were we to strike an average price of $50 as the price realized for all stocks sold on the Stock Exchange in a single active session, the total business would represent a turn-over in wealth of $150,000,000 for 3,000,000 shares; $100,000,000 for 2,000,000 shares and $50,000,000 for 1,000,000 shares. The average I have taken is a reasonable one for there are many securities listed on the New York Stock Exchange commanding prices considerably above their par value of $100 and a small number under $50 a share, while somewhere between that and $100 is the range in prices of a large number of securities; for instance, Pennsylvania,

New Haven, Consolidated Gas, Reading, St. Paul, Lackawanna, Chicago & Northwestern, Southern Pacific, Union Pacific and Jersey Central, to mention only a few of our well-known securities, a price considerably in excess of their par value.

By the rules of the Exchange a member is not permitted to charge his client more than $\frac{1}{8}$ per cent of the par value of the stock as his commission, nor can a member charge less except when executing an order for another member; then he is allowed to make a charge of \$2 for each 100 shares. This commission to the customer comes to \$12.50 on each 100 shares of stock and \$1.25 on each \$1,000 denomination in bonds.

I am going into these small details to emphasize and drive home the realization of what a vast and gigantic business machine the Stock Exchange is. If its members handled orders for 3,000,000 shares for their clients, in one session their commissions would reach \$365,000. If these orders were between members, the commissions would be only \$60,000; on 2,000,000 shares for clients, they would receive as commission \$250,000; between members, only \$40,000; and on 1,000,000 shares for clients, commissions of \$125,000; between members, but \$20,000.

With such possibilities for making money, it can be readily understood why men will eagerly pay as high as \$100,000 for the privilege of belonging to the Stock Exchange. It is safe to say that in an active year of speculation the public pays as much as \$100,000,000 in commissions to the members of the Stock Exchange on stocks alone and almost as much for bonds bought on its floor and not over the counter. In this estimate there is not included the brokerage the public pays to members of the grain and cotton exchanges as well as to the minor exchanges of the country, of which there are quite a number scattered through our different large cities.

But it is not in the commissions the members of the Ex-

change receive that the most imposing statistics are to be found. It is in the aggregate wealth they are instrumental in swinging back and forth, which causes astonishment and reflects the great power of the Exchange.

Here again, by striking an average for the 300 or more days in a year the Stock Exchange does business of only 500,000 shares as the daily volume of transactions, we arrive at the enormous total of $15,000,000,000 in securities changing hands, not considering bonds at all in this estimate. Some years the figures are even larger.

It is true that a great many of the active securities change ownership many times during an active session. It is a fact also that there is considerable duplication and that a great bulk of securities are bought and sold by speculators with no intention to hold for more than a short time and to be disposed of as soon as there is a profit, or when the holders are compelled to let go on account of exhausted margins, but the multiplicity of transactions can in no way overshadow the real function of the Exchange, which is, as already stated, that of a central market. In like measure is the statement true of the cotton and grain exchanges, where, instead of shares, commodities are bought and sold.

Viewing our exchanges, therefore, in their proper light, we must appreciate their importance. Were it not for their ability to make capital mobile, there would exist a great disparity in prices. It stands to reason that the greater the number of buyers and sellers gathered together, the better and firmer tone there will be to values because of the concentrated market.

It is not because Reading or United States Steel shares are superior securities in point of intrinsic worth to a good many other securities that makes it possible to find a market for them at a moment's notice. It is due to the fact that they have a concentrated and active market which the Stock Exchange alone has made possible. People will buy these stocks and buy others equally active and listed on the Ex-

change as they realize they can sell them quickly and at fractional changes in the price, and banks will lend money on them with equal readiness for the same reasons. They will do this in preference to purchasing unlisted securities as a market, for this latter class of securities may not be available at the time one is most wanted. Thus we see where the exchanges perform two useful purposes, that of being a price-making arbiter, a power unto itself of fixing values, and that of being a quick and facile market, rapidly regulating itself to existing conditions.

In a larger way and almost unconsciously, the exchanges accomplish what a country at all times is in need of, and that is a source through which to raise capital for the development of its resources. By the facilities for trading that they are in a position to offer, they quicken the speculative instincts of the people.

It would have been impossible to have raised the capital for the billion and half United States Steel Corporation without the Stock Exchange and its facilities. It opened the sluice ways to the nation's wealth. It made at once possible the marketing of its shares.

The fact is undeniable that capital can be more quickly raised for general industry and for the expansion of our railroads when the public is aware that there will be a market for the new securities. What the public wants is a market in which it can sell as well as buy and this the Exchange provides. Capital gravitates to the moneyed centers. This is a natural law as much as is the law of gravity which makes the apple fall to the earth. It will flow to the center where it can beget the largest return for its use. What is more natural then, than that it should congest itself about the portals of the principal exchanges and its masters avail themselves of their facilities. For capital has its masters. If they are not in the form of the "captains of industry" as we are wont to call our great underwriting bankers, they are unconsciously in the shape of

accumulated deposits in the banks. These deposits, to employ themselves profitably and still be instantly available for other purposes, find the avenue whereby this object can be accomplished through loans on securities listed on the exchange or in commodities, as in grain, cotton or metals.

That is the underlying reason fully explaining why it is that our exchanges, like a great big drag net, can attract to its doors from every direction and from what seems the most inaccessible places, the liquid capital of the nation.

Our exchanges bring in the capital from the four points of the compass, some of it for investment, other portions for speculation and again other portions, the minor part, from foolish people who, sad to say, deliberately attempt to acquire wealth overnight by simple gambling on the fluctuations. To the shrewd and fortunate ones, the Exchange returns their money with substantial profits. From the misguided and unfortunate ones, it exacts its toll. Such will always prove the case. There is no law to prevent it. It is but one of the phases of the operation of the exchanges over which no control can be exercised, for in their function of establishing prices there is no way to prevent gambling in the fluctuations in the quotations.

It has been pointed out by reformers that this could be done by prohibiting margin-trading, by forcing the outright purchase of securities and commodities. But this is a foolish conclusion. Suppose this were attempted. What then, would happen? Instead of the brokers arranging the loan the purchaser of a security would attend to it. He could not be prevented from borrowing a certain sum of money from a bank on securities if there was in existence a law compelling him to purchase securities outright.

If margin-trading is illegal, either from a moral or legal standpoint, then it is equally illegal to purchase real estate subject to an incumbrance. Fundamentally the practice is not wrong. Where it is at fault is its abuse by people who, because of their financial circumstances, ought not to buy

on margin any more than a person with a few thousand dollars should attempt to buy a piece of property he could not carry, but does carry it because he expects to sell it at a profit before he is called upon for more money. This is not speculation; it is gambling.

The real purpose of an exchange is to make capital mobile by gathering it together. It provides capital with the opportunities to make money. It opens channels for investments. It is a price maker, a barometer of trade, in fact it is a great big heart through which come the power and blood needed to feed the arteries of commerce. Without them the commercial progress of a country could be put back many years.

XXV. METHODS OF TRADING IN STOCKS.

All transactions on the New York Stock Exchange are for cash. There is no margin-trading. Members must settle all differences between them for the transactions of the previous 24 hours before or at "Hammond's Time" or 2:15 p. m. At that time all securities must be delivered. All stocks bought on the previous day must then be accepted, and all stocks sold, delivered. Otherwise a purchase or a sale is not good.

If a member cannot settle, he is declared insolvent, and the secretary announces his embarrassment from the rostrum of the Exchange. His accounts are then closed. The Exchange assumes no responsibility for the liabilities of a bankrupt member. They fall entirely upon the members who are unfortunate enough to be the creditors of the insolvent member.

Whatever value a member's seat possesses, however, according to the rules of the Exchange, reverts to his creditors. While failures on the Exchange are unavoidable, the percentage is no larger than in other lines of business.

The Exchange operates a clearing-house, much on the same plan as the clearing-house for an association of banks. This clearing-house makes it convenient for the members to settle their obligations to one another with the least delay.

It would prove a slow and cumbersome process were it necessary every time a member bought stock for a client to draw a check to the member from whom it was purchased or if stock was sold, to deliver the certificate to the buyer and in turn receive a check. Through the clearing-house such details are simplified. Each member has an account against which is credited stocks bought and debited with stocks sold, and settlement made accordingly.

But the mechanism of the clearing-house is not of such importance as are the methods of trading employed on the Stock Exchange. These methods may be broadly divided into two forms; after this they may be subdivided.

First there is the purchase of securities outright. This is the simplest form. All that is necessary in this case is to give a member of an Exchange an order to buy a certain amount of stock at a given price, or at the market price. The broker has the order executed and he delivers the security, charging the usual commission of $\frac{1}{8}$ per cent. His transaction is completed when the stock is delivered.

Market orders are much more easily executed, as they give the broker full liberty to buy at whatever the market price may be at the time the order is given, but such orders are not always to the advantage of the customer. In an active session a stock may jump a number of points in price before the broker can fill his customer's order. Sometimes it occurs in a declining market, that a market order is filled at a lower price than a customer expected. Still, it is not a practice among shrewd traders to place market orders, especially in inactive securities or those stocks in which there is very little trading when it can be avoided.

In buying bonds on the Stock Exchange, or for that matter, over the counter of a bond house, it is understood that accrued interest is added to the price, although this is not mentioned. For example, a bond bought in May, whose interest is due in July, carries three months' interest which is represented in the coupon attached to the bond. This interest for the period between January and May properly belongs to the holder of the bond from whom it is purchased, and must be paid to him in addition to the purchase price.

When a stock is sold, the same proceedings are followed. The member of the Exchange disposes of the security at a fixed or market price, and when the sale is confirmed and the stock delivered, the broker pays his client, less his fixed brokerage.

The more complex form of operation on the Stock Exchange is that of trading on margins. This, as already explained in the previous section, is a method of doing business by which brokers finance the purchase or sale of securities in part for their clients. Say, for example, a customer wishes to purchase one hundred shares of Union Pacific stock. Suppose at the time the stock may be selling at $150 a share. The buyer does not wish to purchase the stock outright, which would cost him $15,000, plus $12.50, the broker's commission. The customer makes a deposit, say, of $1,500, or 10 per cent of the purchase price. Members, unless they are thoroughly satisfied with the financial responsibility of a client, will not accept a deposit of less than 10 per cent of the market price of securities, and will often demand more if the securities desired have an inactive market. Some inactive stock brokers will not buy for customers except by outright purchase, since those stocks have no wide market and the brokers do not wish to be caught with them on their hands in case their customers cannot take them up.

But since the majority of Stock Exchange members will buy active stocks for clients on a 10 per cent margin, the illustration will serve my purpose in explaining in detail how such orders are handled. After the customer deposits his margin and gives his order, the broker, upon executing it, arranges with his bank for a loan for the greater part of the purchase price. It is the usual custom for banks to lend on active securities up to 80 per cent of their market value, always with the proviso that the borrower must deposit additional collateral if the market price declines to where the bank's equity in the loan is impaired.

With a loan from his bank for approximately 80 per cent of the market price of a stock, with his customer having deposited 10 per cent margin, there remains for the broker therefore, only 10 per cent, which he must provide out of his own capital. On some securities he must put up more, while others he must finance wholly out of his own capital,

as the banks will make no loans on them. Here we have a succinct illustration of what is called margin-trading in its simplest form. Now, if Union Pacific stock advances to $160 a share, the customer then has a profit of $10 a share, or $1,000 on his one hundred shares, less, of course, commission and the interest he owes on the balance due on the stock.

Although not stated, it is usually understood, unless agreed otherwise, that all loans on stocks are call loans, made on the prevailing rate of interest on such loans throughout the period the bank carries the stock.

Call loans differ from time loans in that the lender is empowered to demand at his discretion and without previous notice from the borrower, the payment of his loan. With a time loan, or a loan extending over a specified period, the lender must wait for payment until the loan matures.

Large Stock Exchange operators whose business is worth having because of the large profits in commissions, in their trading, have an advantage over small traders as they can privately arrange through their brokers for time loans at reasonable rates of interest as a safeguard against any unusual flurry in interest rates, as is likely to occur in an excited period of speculative activity.

When there is an accumulation of capital in the vaults of the banks, interest rates on call loans are unusually low. There have been times when such loans could be made by large borrowers at interest rates as low as one per cent. But this condition may quickly change. It is often reversed around the crop-moving period, when interior banks draw on their central bank reserves to provide for the borrowing demand at home. Then it is when loanable capital becomes scarce, and commands a premium. Call loans will then sometimes jump to 100 per cent or more.

During the so-called Gates boom in stocks, call loans touched as high as 200 per cent. For one half hour, in October, during the climax of the 1907 panic, call loans were

not to be had at any price, although frenzied brokers, whose tense and blanched faces saw disaster staring them in the face, were willing to make any terms to get money to save them from the ruin that seemed inevitable. A powerful banking syndicate was hurriedly formed to lend $25,000,000 on the Stock Exchange. The money was obtained, and it saved the day.

In adverting to the variability of interest rates for call money it is my purpose to direct attention to the influence these changes exert on speculation. In fact observing speculators watch call money interest rates almost as closely as they study prevailing tendencies and conditions in trade, to determine their effect upon security prices.

Take up once more the case of the imaginary buyer of one hundred shares of Union Pacific stock. If he has a profit, he can close his account and draw from his broker his margin, plus the additional amount represented by the advance in his stock, or if he desires to extend his operation, the increase in his credit balance allows him then to do so.

On the other hand, if Union Pacific, costing $150 a share, declines in price, say in the neighborhood of $140, where the broker fears an impairment of his customer's margin, to the point of exhaustion, he will call upon him for an additional margin and unless this deposit is immediately forthcoming it is within the broker's discretion to close the account, sell the stock and settle with his customer. He does not have to wait until the stock touches $140 a share before doing this. For his own protection, he is allowed this privilege and it is so stated in the agreement the customer signs when placing an order.

The operation slightly varies when a buyer turns a seller of stock. A speculator, believing that Union Pacific around $150 a share is selling too high, will sell the stock through the broker at this price. Suppose he agrees to sell one hundred shares. He deposits with his broker a margin of 10 per cent or $1,500. As he is selling, he does not have to borrow

any money. He simply agrees to deliver one hundred shares for $150 a share when he is ready to do it. Should Union Pacific decline to $140 a share, the seller could buy one hundred shares in the open market at this price and by so doing would be making a delivery of his stock on his selling contract. As he has sold it for $150 and bought it for $140 he has made a profit of $10 a share or $1,000 on his sale of one hundred shares. The greater the decline in the price, the larger his profit. But should Union Pacific advance instead of decline in price, every point above $150, the price he agreed to deliver it for, means a loss of one dollar on each share as each point represents the equivalent of one dollar. If the stock advances to $160 a share, his margin would be exhausted unless he had made an additional deposit to further protect himself.

Now, we here have an illustration of what is called margin-trading, and upon which so much abuse is heaped by reformers who regard it as a malevolent influence upon the country. How inconsistent is the assertion can be demonstrated. A man of wealth or even one in comfortable circumstances may feel perfectly justified in the purchase of a block of stock on margin. He may not wish to tie up the entire purchase price by paying for it outright, although if necessary he could advance the whole amount and take the securities out of the market and put them away in his safe. Has he not the right to make such a purchase? To deny him the privilege and permit a tradesman to use his credit for the purchase of goods would be unfair and unjust.

Suppose he were cut off from the privilege of trading in this manner through a member of the Stock Exchange, he could not be prevented from carrying out a similar operation though more cumbersome, in another form. If he has credit at his bank he could borrow the money to buy the stock outright, and when it has been delivered to him take it over to the bank and pledge it as collateral for his loan. When the stock shows him a profit he could then sell it, pay

the loan and the matter would be closed. Assuredly banks could not be prevented from making loans upon good collateral. That is their business. It is one of the principal mainstays for the profitable employment of their deposits.

Between the two methods there is no difference, save the one operation is more mobile than the other. There is nothing fundamentally wrong in margin-trading. It is not an evil. The evil lies in the abuse of the system by persons whose circumstances and lack of knowledge does not justify their trading in this manner. Such people attempt to do the impossible on a "shoe-string." To some extent it is the fault of the brokers, but it is fair to say on behalf of the majority of the members of the Stock Exchange, that they do not encourage speculation among those whose financial resources are limited, or by the ignorant, while speculative accounts of women are regarded as particularly offensive by the Stock Exchange itself.

It is well-nigh impossible to wholly exclude these people from speculation. Somehow or other they will gamble in some form or other, and find a means to satisfy their cravings. The Government put a stop to the Louisiana lottery, yet the people kept on gambling. Racing was stopped by different states, but the restrictive measures failed to check betting on the races. So is it true with card-playing. Illegal it is, but gambling rooms continue to thrive.

There are other abuses of the machinery of the Stock Exchange, as I shall try to point out later, but they can in a large measure be controlled without enforcing the suicidal policy of striking a blow at the foundations of the function it performs for the country—of providing it with a great central market for the greatest mass of its securities.

Selling stock on margin is regarded a greater evil than even buying on margin. No one should sell what he does not own, is generally the claim made to justify this contention. How inconsistent this is can also be easily demonstrated. All of our millers sell flour long before they know what

the harvest is to be. They bank on the correctness of their judgment as to the size of the crop, expecting to buy their wheat cheap enough from the farmers to make a good profit out of the difference. The contractor agrees to build a house for a certain price, relying on his judgment of the market for labor and material to net him a good profit, although in the meanwhile prices could have gone up above his estimate. Even the laborer sells his labor "short," and theoretically, when he finds he cannot make his living expenses square with his wages, he has lost money.

Wherein then is the difference between the examples just cited and selling securities? If a person believes a security is commanding, in his opinion, too high a price, he is morally justified in selling it, even if he does not own it, as much as the miller has the right to sell flour he expects to grind from next season's wheat harvest, or the contractor estimates on constructing a building from material he has not yet bought or labor he has not yet hired.

Nor can the lay mind fully appreciate, without being thoroughly familiar with the economic value of speculation, what a great bulwark the selling of securities which are not owned at the time they are sold is in times of stress, and when everyone seems to be anxious to unload securities. In such times these "short" sales are the only mainstay of the market. What has been sold and is not owned, must be bought back sooner or later by the sellers so that they may turn their profits into cash. Were it not for these "short" sales buttressing the market, prices would not only decline perpendicularly, but they would fall all to pieces and the widespread fear it would arouse would have a most disastrous result.

XXVI. METHODS OF TRADING IN STOCKS.
(Continued.)

On the stock exchanges, the dollar mark is the sign of values and it is divisible into fractions of eighths. Each $\frac{1}{8}$ stands for $12\frac{1}{2}$ cents of the dollar. To more clearly illustrate the proposition, take, as an example, such a popular stock as United States Steel and suppose it is reported in the opening quotations as selling at the even mark of \$70 a share. The next quotation is at $70\frac{1}{8}$: this means the stock has been bought for \$70.12$\frac{1}{2}$. If the quotation is $70\frac{1}{4}$, it represents \$70.25; at \$70$\frac{3}{8}$, it is \$70.37$\frac{1}{2}$; at \$70$\frac{1}{2}$, it is \$70.50; at \$70$\frac{5}{8}$, it is \$70.67$\frac{1}{2}$; at \$70$\frac{3}{4}$, it is \$70.75; at \$70$\frac{7}{8}$, it is \$70.87; and then \$71. Conversely, every eighth fraction less in the reported price of a stock represents a loss of exactly $12\frac{1}{2}$ cents in its market value and correspondingly a greater loss when the fractional declines are larger.

On the board of trade or the produce exchange the transactions in grain are on the basis of bushels. On the cotton exchange cotton is bought and sold in bales. On the grain exchange the dollar is the mark of value and it is also divisible into fractions as small as 1/16. In cotton it is divided into points.

On the stock exchanges are to be found shares and bonds only. On the grain exchanges agricultural products are the staples in which the public barters, including live stock and the different farm products. The popular staples forming the bulk of the business are wheat, corn, oats, rye and barley. From a trading standpoint the lesser staples are live stock, under which head are cattle, hogs, lard and tallow. Live stock is sold by the pound; lard and tallow by the tier. On the cotton exchange all the dealings are confined to cotton and its principal constituent, cotton seed

oil. In New York City there is an important coffee exchange and a metal exchange, but neither one has much of a public following. As important as are our dairy products, such as milk, eggs and butter, in point of aggregate money value, very little trading is done in them on the exchanges. Whatever speculation there is in them is carried on directly among the dealers who, under favorable circumstances, sometimes attempt a coalition in their interests to maintain higher prices and towards that end the storage houses prove an important ally, as they enable the dealers to store their purchases until they can market them at profitable prices.

The followers of the different exchanges are divided into two camps. We know them as "bulls" and "bears." The bulls on the stock exchanges are the optimists, are the men who are prepared to back their judgment of the betterment of trade and its consequent reflection in a better price for securities. With the bears it is different. They see the darker side of business and expect to benefit by a decline in values which may be brought about by slackening in trade and from commercial disasters which they try to anticipate through sales of securities before the occurrence of the trouble.

On the constructive side of values are ranged the bulls; on the destructive side, the bears. Although, in public opinion, the bear's position is an unenviable one, his is a necessary role in the scientific game of speculation. As already pointed out, the bears in a critical period act as about the only mainstay against a wholesale destruction of values.

Still, it is more or less a stock market truism that there are few chronic bears who, in the long course of events, have kept the large fortunes they were popularly supposed to have made, notwithstanding that their opportunities for quick and substantial profits, when their position is the correct one, are much greater.

Our greatest stock market bears, those who have made stock market history died comparatively poor men. Occa-

sionally there passes over the stock market horizon a meteor in the shape of a successful and spectacular bear who happens to plunge on a decline in security prices at a psychological moment and is carried by the avalanche in the slaughter of values from comparative obscurity to a position of great wealth. Yet, usually his good fortune is only temporary. Somehow or other these striking figures seem not to realize that stock values can no more continuously decline than they can constantly and without interruption keep going up. They overstay their market and within a short time all their wealth slips away as easily as it came to them.

A recent illustration of this, and which is still remembered, is that of J. Brandt Walker, a daring Chicago speculator, who burst into fame as a big stock market bear on the eve of the great panic of 1907. The newspapers all over the country printed columns about the many millions he was credited with making. There can be no question about his temporary success; no doubt his profits ran into millions, but it was less than a year later that he lost all his winnings and, as a prominent stock market figure he became only a memory.

The chronic bear sooner or later invites disaster upon himself. So also does the chronic bull. The successful trader is that person who can adapt his opinions to the long trend in the course of values, whether it be downward or upward. That there takes place periodically an adjustment in business cannot be refuted, but it does not occur at regular periods, for if such were the case much of the uncertainty connected with speculation and upon which it thrives would be eliminated. Adjustments often come quite suddenly and unexpectedly. There will come a check to a boom. It usually occurs when we have exhausted, in the rapid haste for expansion, all the available capital at our command. In the same order a check to a decline will occur when all the forced liquidation has been completed. Between the two extremes there takes place a period of stag-

nation, a sort of pause in our activities, a pause to afford an opportunity to form new conclusions.

Yet, broadly speaking, every one who deals in securities is at one time or another a bull or a bear. When a person sells a stock it is the sign that he has concluded the rise in the stock's value has reached its apex and he is willing to let someone also take the chance of a further appreciation. He may sell for other reasons. Nevertheless, whatever the cause, the seller is constructively a bear. On the other hand, the buyer is a bull. If he is buying a stock he has sold to someone previously to make his delivery, it is the sign that he has decided in his own interest that the decline in value has run its course. But in a growing country the predominance of opinion is towards the bullish side of the market. It is a natural position.

J. Pierpont Morgan gave it as his opinion some years ago that anyone who is not a bull in this country would eventually go broke. His saying has become a stock market adage and not without good reason. Our financial history so far has clearly shown that the country has emerged from every panic and depression stronger than ever and capable of greater progress.

In the eighties, when nearly two-thirds of our railroad mileage was in charge of the courts, men who had faith in the country's future, men like Morgan, Hill, Kennedy, Vanderbilt and others, were laying the foundations for their present huge fortunes, whereas other men who could not see the sunlight behind the heavy clouds of pessimism, one by one went broke.

Then, too, it is only a natural trait of human nature to be a bull. Underlying the greatest progress is the spirit of optimism. It naturally comes to most all of us to see the brightest side of business. In fact, our wishes are fathers to this hope. Our prosperity individually and collectively has progress as its foundation. Morgan knew this and that is why he gave utterance to this now famous axiom.

The very fact that nearly nine out of ten people are naturally bulls in their inclination is what bucket-shop operators banked on in the successful conduct of their outlawed business before the authorities decided upon a concerted plan to put a stop to them. Bucket-shops are institutions which never buy anything, but simply gamble against the judgment of their customers. A bear panic or a bear market was essentially necessary for their success as such moves wiped out the paper profits of their customers, most of whom were perpetually "long" of stocks, or chronic bulls. These concerns were simply gambling places whose backers bet their capital on the price fluctuations against the capital of their clients. When bucket-shops were tolerated a long protracted bull market usually saw a great mortality in their number, whilst a bear market found them sprouting in numbers as fast as mushrooms.

In the grain, cotton and coffee markets, the position of the bulls and bears is a reversal of that occupied in the stock market. The bull on these staples is not the advance agent of prosperity. He does not expect to see higher prices because of the greater out-turn in the harvest. Higher prices come to him as a result of a shortage in crops. The bear is really the bull considered in the light of the benefit accruing to the public from his operations. He works for lower prices on his expectations of a bumper harvest.

You will be interested in the definitions of some of the principal terms employed to designate trading on the different exchanges. The "longs" and the "shorts" are other names to differentiate between the bulls and the bears. The "longs" buy for a rise, the "shorts" sell for a decline.

"Ex dividend" means that on the given day when a corporation's books close for the payment of the dividend to all stockholders of record, the stock is quoted with the dividend deducted from the price. Unless this is known the lower price of a stock selling "ex dividend" is likely to confuse the uninitiated. When Union Pacific declares a quar-

terly dividend of $2\frac{1}{2}$ per cent and should the price of the shares be $175 the day previous, the day the books close, Union Pacific will sell "ex dividend," or at $172.50, meaning that the $2.50, the equivalent of the dividend on each share, has been deducted. It is the same when a corporation declares a stock dividend in addition to a cash dividend. Sears Roebuck & Co., in 1911, gave the stockholders a stock dividend amounting to about the equivalent of $12 a share. The day after the stock dividend was payable the stock sold, stock and cash "ex dividend," or about $14 less than on the previous days.

"Rights," which one sees frequently mentioned, denote the market value of the privilege accorded to stockholders of record in a corporation to purchase additional shares it has authorized. In value these rights vary in accordance with the market premium the stock may command.

Of course, if a stock is selling for less than its par value, there is no value to the rights to subscribe for new stock. But with some corporations such rights are extremely profitable. It has been estimated for some years back that besides their cash dividend the stockholders in such a prosperous corporation as the Chicago & North-Western have received rights to more stock which brought their average return upon their investment nearer to 25 per cent than 7 per cent, provided that they availed themselves of their privilege to sell their "rights."

A corporation with a $100,000,000 capital may elect, upon the favorable vote of the majority stockholders, to increase its capital by $10,000,000. Each shareholder would then have the privilege to take ten new shares for each ratio of one hundred shares owned. If the stock sells for $125 the market value for one hundred shares would be $12,500, and for ten shares $1,250. Therefore, if a corporation offers its shareholders the privilege to take the newly authorized stock at par, the rights would be worth $250 on each block of ten shares or $25 on each share.

In stock market parlance, these rights are also called a "melon cutting." These "melons" may consist of new stock or the distribution of a large extra dividend, either in form of cash or stock. Such prospects frequently lead to a considerable outburst of speculation in the shares which are expected to receive liberal treatment.

While the bulk of the business on the Stock Exchange is transacted in the unit of one hundred shares or multiple thereof, there is also considerable business done in smaller units and to designate this trading the term "odd lot" or fractional orders has been coined among brokers, meaning the purchase or sale of shares in less number than one hundred shares.

An "Irish" dividend is a term of sardonic derision. It stands for an assessment levied by an embarrassed corporation on its stockholders in an effort to re-organize and place itself once more among solvent corporations.

Then there are such contracts as "puts," "calls," "spreads" and "straddles." A "put" is a contract which gives the holder the right to deliver to the maker of the contract a number of shares of stock at a specified price within a limited time. On the other hand a "call" gives the holder the right to demand from the maker of the contract a certain number of shares at a specified price within a limited time.

Speculators often make such contracts with others as a precautionary measure to limit their losses. The buyers of these "put" and "call" contracts pay a certain price for this privilege to demand or deliver stock within the time limited by the contract.

A, for example, will buy one hundred shares of American Car & Foundry stock for $60 a share. He may not wish to take more than a loss of $5 on each share, so he sells a "put" to B on one hundred shares, good for thirty days for $150. Should the stock decline below 55 within these thirty days, each point decline represents a profit to B of $100 on

the one hundred shares. If the stock goes to the $50 a share then B, the holder of the "put" can go into the market, buy the one hundred shares at a cost of $5,000 and deliver it to A, the maker of the contract, for $5,500. His profit then would be $500, the difference less the cost of the "put," $150, and the broker's commission, $12.50, or $337.50. Should the stock not decline during the term of his contract, he is only out his $150.

The operation is similar in a "call" contract. A, in this instance, will sell one hundred shares of Car & Foundry stock at $60 in anticipation of a decline but wishes to limit his loss to $5, that is, he wants to protect himself against any further advance than $65 a share. So he sells to B a "call" contract that gives B the privilege of calling upon him for one hundred shares at any price above $65 a share within the specified thirty days. Every point advance above $65 represents then a profit of $100 to B, less the cost of his call and broker's commission.

The cost of such privileges varies in accordance with the duration for which they are given: the shorter the time, the cheaper the price; and the longer the time the dearer the price. The only risk involved to the purchasers of these privileges is their cost. They are out this money if the opportunity to exercise their privilege at a profit fails to offer itself within the specified time. General conditions and the technical position of the stock market usually determine the market value of "put" and "call" contracts.

A "spread" is a privilege to combine a "put" and a "call" contract. The holder of a "spread" has paid for a privilege for a certain time to either deliver a stock at a stipulated price to the maker of the contract, or call upon him for the stock. In buying a "spread" contract the purchaser expects to profit through a large advance as well as a decline. In either case, should the stock pass his contract price, he could execute his "spread" and take his profit, figured on the same basis as illustrated in the "put" con-

tract. Should the stock both advance and decline within the contract period to a favorable point of execution, the holder of a "spread" would doubly profit, but should it touch neither figure then he is out the money the "spread" has cost him.

A "straddle" is not unlike a "spread" contract, except that it is made at the market and the execution of either one of its privileges nullifies the other. The cost of the "straddle," however, is the most expensive of any of these mentioned privileges.

These contracts are favorites with small speculators who are willing to assume the risk the privilege cost for either a "call" or a "put" on a stock in the expectation that the chance will occur during the life of their contract to execute it at a profit. However, such privileges ought to have the endorsement of a member of the Stock Exchange. They are only good if the maker of the contract is himself solvent.

There are other technical terms employed in the Stock Exchange operations, but they are of minor importance. The reader already knows what a margin is, also that interest must be paid on the balance of securities which remains unpaid.

"Arbitraging" is a form of trading requiring the most scientific skill and rapidity of thought. It means taking advantage in the difference in prices on the same securities between two markets, and may be transacted profitably even on the variation of a slight fraction. The principal arbitrage business is done between New York and London Stock Exchanges.

XXVII. OPERATIONS ON OTHER EXCHANGES.

Operations on the grain exchanges are for future deliveries. Wheat, corn and oats are dealt in according to grades. If an operator buys a certain number of bushels of wheat he does so with the understanding that he will accept and settle for what he has bought on or before delivery day when the wheat must be tendered him; vice versa, he agrees to deliver the wheat if he is the seller.

All deliveries must be made on the last day of the month, when all settlements are also made and if the operator is unable to meet his contracts, it is at once a confession of insolvency and his contracts are bought in for his account on the same basis of settlement as on the stock exchange.

In reading over the grain quotations in the daily press, it is to be noticed that the grain concerned in the trading is designated by different months. This implies that all sales and purchases are for the wheat or other coarser grains, which must be settled for on the last day of the designated month.

The two principal crops in wheat on which the liveliest speculation converges are the Spring and Winter wheats. The last day of May is usually an important day on the Chicago Board of Trade, for it is settlement day for one of the principal crops. In size the Spring wheat crop is the smaller. The Winter wheat crop is the larger of the two.

In New York there is a produce exchange which was organized at the height of our large export business, but with the falling away of this part of our grain business, trading on this exchange has narrowed considerably.

It seems to be the fate of large agricultural nations for their exports of agricultural products to grow smaller as

their population increases. It was not so many years ago, it will be remembered, that our export of wheat was depended upon by financiers to establish for us a large credit balance abroad, thus providing gold to import when it was most needed. But for this purpose we can no longer depend upon our wheat. In fact, we raise now only one important staple which we still sell abroad in large quantities—that is our cotton.

James J. Hill about hit the nail on the head when he described our decline as a wheat-exporting nation, when he said it was to be expected that we would not have much to spare after feeding the mouths of 90,000,000 people. It was not that we grew less wheat but we were not keeping pace in increasing our acreage. We are a much larger family today than ten years ago and use for our own domestic purposes, the bulk of the crop.

Our greatest crop in quantity is corn, but we do not export as much of it as we could spare. Our corn crop has grown steadily until now it causes no surprise when the yield reaches such an enormous total as 3,000,000,000 bushels annually.

The value of our harvest, including all the live stock and dairy products was last year estimated by the government agricultural statistical department to be over $9,000,000,000. Of this wealth the corn crop alone contributes nearly 20 per cent; wheat comes next; after that the cotton yield. The value of such minor crops, such as hay, rye, flaxseed, etc., runs into the hundreds of millions; so also with that once despised growth of uncultivated fields, alfalfa, or long shoot grass. The hen with whose industry even the busy city housewife is thoroughly acquainted, contributes each year nearly $200,000,000 to the nation's wealth.

The out-turn of our fields is really the corner stone of our prosperity. As it is all new wealth, reproducing itself every year, it can be readily seen without my pointing to it, how much every artery of business depends upon our harvest for

its life. It is this wealth which supplies the blood that keeps trade going along briskly. While our mining industry is second in importance, its prosperity largely depends upon the continuation of good harvests.

The smaller the crops we raise, the more diminished is our prosperity. A crop failure would be disastrous. Fortunately, for a good many years we have escaped such a calamity. Our immunity from such a misfortune for nearly twenty years is largely credited to the gradual improvements in our agricultural methods. Whether this is true or not remains to be demonstrated. There are many who doubt that this is a logical explanation and the consistency of the weather supports at least to some extent their skepticism. But this is neither here nor there. The point I wish to make is the natural evolution in speculation in these important staples in which the operators specializing in them are concerned to no greater extent than are the operators in stocks and in cotton. For them all a large crop spells prosperity; a short crop, a period of adversity; and it is quite natural that all keep a sharp eye on the weather conditions and the preliminary crop estimates which the Government publishes during the growing season.

But the large grain houses do not rely entirely upon the Government's figures. The majority, to supply their clients with intelligent information as to the progress of the different crops, employ men to travel over the crop belts and make their reports. These men, because of their training and keen perception, have acquired the reputation of being crop experts. A number of them from their reports might also be said to have an inclination to regard themselves as naturalists, for in their own vernacular they have added some species to the number and kinds of bugs and insects destructive to farm products. One species in particular is the June bug, which very few people knew until the crop experts discovered it.

When Spring bursts upon us, the crop experts get busy, and until the season closes and the several crops are safely in the barns, we are liable to have a half dozen crop scares caused by the different conditions, maybe through lack of moisture, bugs, a protracted dry season or early and severe frosts. Still, were it not for all these elements of uncertainty interspersing themselves in the period between the seeding and the final harvest, there would be little speculation.

It is from these uncertain elements that differences of opinion arise which make bears of some people and bulls of others, while with stock market operators, although only on-lookers, they nevertheless form their judgment as to the course of their market from the crop prospects, and they strive to correctly anticipate them in their commitments. Furthermore, there are a large number of industrial corporations and railroads, known as the granger roads, for they largely depend for their principal traffic on a generous harvest, whose prosperity is vitally wrapped up in our crops. For that reason it is well for every student of finance to know of what importance the crops are to us.

In other directions is the attention of the operator on the grain exchange drawn. He watches the progress of the harvest in Argentine, Russia and Canada, the three countries which still rank as the large exporting nations, as it is the size of their crops which affects the price of the surplus in our crops that can be exported. A small crop in these countries means higher prices for what portion of our cereals we can sell abroad.

If the people of Europe took more kindly to corn, we would have here a nucleus for an extremely important export business. But people abroad do not take kindly to corn, still considering it largely a food fit only for live stock, rather than for human beings.

In the production of cotton this country largely retains its monopoly. We have only one competitor worth consider-

ing—Egypt, and even there the cotton crop is in the aggregate, compared with ours, of small proportions. Our cotton crop runs between 12,000,000, to 17,000,000 bales each season. A bale weighs about 500 pounds.

Dealing in cotton is all done on contracts calling for future delivery and for brevity they are designated in the market reports as "futures." The quotations are divided into points, each point representing one cent and so many points make a bale. What is called spot cotton means cotton for immediate delivery and on hand.

There are two principal cotton exchanges in this country—the New York Cotton Exchange, and the New Orleans Cotton Exchange. Between them a considerable business is done. The operations on the Liverpool Cotton Exchange are closely intertwined with the dealings upon our own cotton exchanges, for Liverpool is the greatest distributing market for our enormous exports of cotton. The importance of our principal cotton exchange, which is the New York Cotton Exchange, as a center of speculation is apparent from the fact that, next to the New York Stock Exchange, its memberships command the highest price.

Among the other exchanges the Boston Stock Exchange is by far the most important. The principal securities on its boards are largely mining stocks, and those consist mostly of the copper stocks. But even of them the New York Stock Exchange has absorbed a large number. The transactions there are along lines similar to those on the New York Stock Exchange. So also with the Chicago Stock Exchange. But in Chicago we have an exchange with an imposing structure for its home but transacting very little business. This exchange has never recovered from the shock it received at the time the Moore Brothers first took their flyer on a large scale in the stock market, using the Diamond Match Co. shares as their object of manipulation. As a result of their operations, the Chicago Stock Exchange, which was then located at Dearborn and Monroe

Streets, was forced to close its doors for a few days to prevent a panic. All the brokers, when they tried to liquidate their Diamond Match Co. stock, found there was no market upon which to sell and the exchange stopped doing business temporarily, to enable brokers to effect private settlements. The disastrous experience of the Moore Brothers spread the belief that the Chicago Stock Exchange did not provide a market big enough for large operations, from which impression it appears never to have recovered. Even at the present time there is seldom a day when the total transactions reach 3,000 shares in all, and this business is mostly done in securities of local enterprises whose issues are not large enough to warrant their listing on the New York Stock Exchange.

Conditions on the Philadelphia Stock Exchange are similar but not in such a pronounced form. The principal securities, like Lehigh Valley and the Philadelphia Company, which were once the popular stocks on this exchange, have finally found their way to New York City which seems to be the logical center for all securities, and to which they finally come when ready for the broadest market.

There are smaller exchanges in the other leading cities like Cleveland, Cincinnati, Pittsburg, and St. Louis, but the business done on them is in small proportions and hardly worth mentioning. Even that small business is all in local securities. While all these points are important financial centers, most of the transactions in securities are made over the counters of the investment concerns.

The younger members of the Pittsburg Stock Exchange tried, in the hope to revive operations on a more extended scale, to introduce dealings in mining shares. For a while their plans met with partial success, but it was a dangerous innovation, as results soon proved.

As most of the shares were in mining enterprises in the early development stages, the operations resulted disas-

trously in most cases to all who participated in the speculation, and this was mainly caused by the enthusiasm of the brokers, who, although ignorant in the first place of the fact that such securities are in most cases precarious speculations, still were desirous to give them a rousing introduction by a campaign of manipulation which ran prices up to excessive heights. The fall was sudden and disastrous. The exchange has not yet recovered from this ill-starred episode.

San Francisco has a mining exchange, where the nature of the mining business is better understood, and as the city is the natural banking center of the industry, it is also the logical market for these securities. There is a smaller mining exchange in Salt Lake City, and one also in Butte, Mont., and one in Duluth, Minn.

The development in the oil industry in California brought into existence an exchange for dealings in oil stocks. Whether it is to become a permanent exchange remains to be seen. When oil was first discovered in Pennsylvania, Oil City had an oil exchange and it thrived while the excitement lasted. But as an important factor it passed away with the collapse of the oil boom. Such was also the case in Beaumont, Tex., when oil was first discovered in that part of the state. It, too, went out of existence with the passing of the boom.

With a brief mention of the New York and Boston Curb markets, I shall have finished with the principal exchanges in the country. The New York Curb is a peculiar institution. Until the present, there has been no sort of control over it. The brokers who traded there were under no rules of restraint whatever. Any security could be listed there, for what a listing meant was merely that some broker introduced it to the other brokers who were willing to execute orders in it. If there was enough business in old clothes and shoes, they could just as well have executed orders in them, if there was any money to be made. A market as lax as this could not es-

cape becoming the scene of a large number of financial scandals which was unfortunate for its own prosperity, as the crookedness revealed, in the end, drove the public away when it realized no efforts were made to protect investors from financial sharks.

Fortunately for the Curb market, which can be made an important market, an important reform was inaugurated in the formation of an organization to supervise its conduct, pass upon all securities, and the character of brokers. This will restore the market in public confidence, provided the reforms inaugurated are vigorously enforced. Quite an array of securities now listed on the Stock Exchange have found their way there through the Curb market, where they made their first bow to the public.

The Boston Curb market was organized along this line a year ago and is now housed in a building. While a few industrial stocks are dealt in on both these markets, the principal listings are in mining stocks.

The most important market for our securities abroad is in London. There some of them are listed on the Stock Exchange; the greater number, however, are listed on the Curb. There is a difference in time between these markets of about five hours, a sufficient margin for trading between the two. American traders will sometimes sell in London five hours ahead of the New York market and buy their stocks back in New York the same day, expecting to profit by a decline here as a cause of a weak opening in our stocks in London.

The London market quotations sometimes exert a pronounced influence upon our own shares, and consequently stock market operators closely watch London prices which are on hand before our own day's business session begins.

There is some dealing on the Berlin Bourse in the American stocks, but not to an extent worth mentioning. Of late, France has shown considerable interest in our securities, a few of which have succeeded in forcing their way into the

sacred precinct of the "parquette," which is the Bourse proper. But the majority of American securities in the Paris market are still kicking their heels out on the "Coulisse," which, as a market, corresponds to our Curb.

Holland, next to England, is the most important market for American securities.

XXVIII. PANICS.

There are two kinds of panics—one, a commercial or business panic, the other, a stock market panic. A commercial panic affects the country as if it were stricken with paralysis. In most cases it is superinduced by over-expansion. A stock market panic is an affair more localized, whose injurious influences may prove of temporary duration only.

Some economic theorists attribute the responsibility for business panics to an excess of speculation. I am, however, inclined to the opinion that speculation is rather the symptom of it than the actual cause. It is a human trait, during prosperous periods, when money-making becomes a comparatively easy task, to keep on expanding as long as capital can be borrowed with which to spread out.

The result is an excess in speculation. The easier profits come, the more daring is the use for which they are employed. Men, who have accumulated their fortunes rapidly, are anxious to double their wealth, then triple it and then quadruple it. The more they make, the more they want, usually. They blindly plunge ahead without considering that the pace they set cannot always be maintained. They raise their structures on weak foundations. Therefore, they are totally unprepared to withstand any pressure placed upon their resources by a sudden tightening in the supply of capital, of which they have been free borrowers and they quickly find themselves financially embarrassed.

Creditors demand their money; they cannot always get it. As other creditors are in turn dependent upon them, they are quickly and similarly affected. Like a prairie fire, financial embarrassment then jumps from one place to another, hurtling over weak business structures and impairing

sound ones. A policy of drastic curtailment is hurriedly enforced in every direction. Capital grows extremely apprehensive and is not obtainable except at usurious rates of interest and only on gilt-edged collateral. Fear also largely enters as a factor into a business panic. In fact it is from fear the name "panic" originates. There is a sudden rush of creditors for their storm cellars and when such stampedes occur, values are sacrificed and often go begging. It is then that the unprotected suffer the most. They are composed of that class of borrowers who have borrowed until they have nothing left in reserve—no other collateral to offer to protect their outstanding loans when payment is demanded without delay.

Here we find a real estate operator forced into bankruptcy because he was over-extended, there a wholesale merchant, and at another point a large retail merchant. Banks are discovered to be in a weak position, for their loans are in collateral which cannot be marketed quickly and their reserve in cash is at such a low ebb they cannot long withstand a run from affrighted depositors. All this is the psychological side of a panic.

While panics are largely the logical outcome of over-expansion, the severity of their effect is produced by fear. This is demonstrated frequently enough in the process of readjustment following, when embarrassed ventures are brought back to solvency without any loss to the creditors.

Nor do panics often throw before them the shadows of their coming. They more generally burst upon us unheralded and when least expected. The first signs of our last panic, that of 1907, appeared in March, when there occurred a sharp and sudden break in the prices of securities, for what reason few at the time were aware and others only half surmised. The real cause was the sudden demand for a large amount of capital from interior banks when the financial centers were unprepared to meet it.

It may be somewhat difficult to those unacquainted with

our intricate financial machinery to determine how a sudden demand for money can affect securities so seriously. But it will be better understood when some light is thrown on our peculiar banking structure. Our national banks are compelled to maintain a certain per cent of their deposits at the reserve centers. The banks in which they keep these deposits allow interest on them while they in turn, to earn this interest, must lend it out in demand loans, which loans are principally upon securities having an active market.

Thus it happens that loans on such securities are the first to be called. The borrowers, finding their loans called, find they cannot borrow elsewhere and are forced to sell their collateral for what they can obtain. They have no other recourse. Such were the conditions on the day in March, 1907, when the first signs appeared in the stock market of the panic of that year. In October when the pressure could no longer be withstood it burst in all its fury. It required almost a year and a half for the country to get over its worst effects. The recuperation has been slow, as it always is, as it takes some time before the damage can be repaired.

That the stock market should furnish the first warnings of a panic, is but natural. It is here in the first place where over-speculation, the most pronounced symptom of a panic converges and as it is a quick market it is here also that lenders of capital hurriedly rush to liquidate their loans, and get their money back. Months afterwards the effects begin to make themselves felt at distant points.

Imagine a pool of water into which a pebble is cast. 'At first the pebble makes a small ripple but rapidly one ripple after another is formed each in larger dimensions until finally the entire edge of the pool is affected. This is exactly what happens in a business panic: first to be affected are the financial centers, then its circle of influence extends further, until finally the whole country is engulfed.

But with all their bad effects, panics are useful, since

they are viewed as necessary at times to bring about an adjustment between industry and capital available for its exploitation and such readjustments come at varying intervals. I shall not here enter upon a long discussion about the causes back of panics and some of the remedies proposed to ward them off. This subject can be better left to others, for it could be extended into chapters while the space at my command is limited. I shall, however, touch upon the agitation for a Central Bank as one of the means to prevent panics and, if it cannot accomplish this, it can at least temper the severity of their effects. The idea in back of a Central Bank is to provide a citadel of financial strength that could be depended upon to automatically expand or contract credit facilities. In England, France, Germany and the other continental nations are such institutions. While they do not succeed in staving off a period of business stagnation, they at least demonstrate that they can minimize the harm through their note-making powers.

We need some like institution patterned along somewhat similar lines in this country which through its credit facilities could extend aid where most urgently needed and required. As incoherent as is our banking system today, our banks attempt the functions of a Central Bank in a panic through their associations and by means of clearing-house checks that temporarily take the place of money until all danger of large withdrawals of deposits has passed. This was done in the panic of 1907 as well as during a number of previous panics.

If we can consider that there are any visible forerunners of panics, carrying warnings ahead of their coming, I should say that they would make themselves apparent in at least three forms, namely, an excess of land speculation, excessive interest rates and an abnormal shrinkage in the reserves held by the banks. These reserves are the percentage of cash to the amount of deposits on hand to meet the demand from depositors. But these indications are not in-

fallible, for it has often occurred that where there existed all the conditions pointing to a panic, a panic never occurred, for correctives were applied in time.

What makes an excess in land speculation a dangerous menace, is that it is the most unliquidable form of collateral of any for loans in hard times. Buyers cannot be found when they are wanted. Land speculation is also the last extreme of speculation. It marks the period of speculative excesses. Therefore its progress is closely watched by keen students of financial conditions.

The tightening in interest rates denotes a growing scarcity of available capital. Money follows the law of supply and demand, as it is but a commodity in the final analysis. If there is plenty of money, interest rates are low and correspondingly they increase as it becomes scarce. The difference between loans and deposits of the banks shows their available cash resources. The smaller the difference, the greater the danger to business and the weaker is the structure to withstand the assaults of a panic or fear on the part of creditors.

Corners Can Cause Stock Market Panics.

Stock market panics can, however, take place without disturbing the country's prosperity. Their bad effects can be localized. But such flurries of fright are largely caused by the attempt on the part of daring speculators or powerful financial interests to corner certain stocks.

The Northern Pacific corner is an example of this. The late E. H. Harriman, to prevent himself from being excluded as a railroad factor from the Northwest, made an effort to buy enough shares in the open market to acquire control of the Northern Pacific. Opposing his efforts were James J. Hill and and J. P. Morgan, who in turn were buying all the stock they could lay hands on to prevent Harriman's securing control. A good deal more stock was sold to both by speculators than there was authorized by the road or was outstanding, with the result that when the time for

the delivery of the shares drew near the sellers began to scent the scarcity of the stock and began frantically to bid for what they had sold and could not deliver, bidding it up rapidly until it touched a price of $1,000 a share. The day will long be remembered in the annals of the New York Stock Exchange, as it was a day of intense fear and demoralization. It meant the ruin of a great many Stock Exchange members if they could not get the shares of Northern Pacific they sold and in turn would have dragged down to bankruptcy other members who were not concerned in the Northern Pacific speculations but were large creditors of the members who were involved. The warring financial interests were aware of the dangerous conditions and arranged matters so that a private settlement could be effected and by their efforts the danger of a great many failures was averted. The panic lasted but a day. Beyond the Stock Exchange it did not extend. The only individuals injured were the stock market speculators. Yet the case clearly illustrates how a panic might occur on the Stock Exchange and go no further.

But corners are very dangerous things to attempt. They very seldom succeed. A corner, to be successful must be so operated that the security whose price was bid up to a high figure can be in turn sold readily. It happens at times where this is impossible.

Many corners have been attempted on the Chicago Board of Trade. "Old Hutch," as Mr. Hutchinson, a wary speculator was nick-named, tried it a number of times only to find himself penniless in the end.

Young "Joe" Leiter had the idea that a crop of wheat would not reach its usual proportions, so he kept on buying all the wheat that the other traders were willing to sell him and which had to be delivered to him on a certain day. On paper his profits ran into the millions. To turn those profits into cash his corner depended upon the inability of those who sold him their wheat to make deliveries which

would force them to buy it back from him to make their contracts good.

But when the final day for delivery came around, wheat poured in upon Leiter from places he never expected any existed. Elevators were ransacked for wheat and rushed in cars to Chicago. There was such a deluge of the cereal upon the young speculator that his wheat corner was quickly knocked to pieces and instead of profits in the millions, Leiter lost all his fortune and a few millions which his wealthy sire had to put up to square his son's accounts.

Another spectacular speculator who came to grief on the Chicago Board of Trade as the result of his efforts to corner wheat, was "Ed" Patridge. Most of us still remember the Waterloo which overtook Sully when he attempted to corner the available cotton crop.

There have, though, been men who successfully operated corners. One of these speculators is Charles Patten, the Chicago speculator. He has cornered oats, wheat and cotton successfully in their turn and has reaped millions as his gains for his daring. He now claims he has withdrawn from the market. If he holds to this resolution he will retain his millions, but should he venture back into the Pit and try to repeat his speculative coups, there are many who believe he would lose what he has by trying to run a corner once too often.

It is fortunate that the Stock Exchange does not tolerate any attempts to corner a security, as it realizes the harm which could arise from such attempts. Through its discretionary power it can enforce private settlements and largely interfere with the profits which could be made from a corner and this, of course, discourages any deliberate and preconceived plan to bring about a corner. The Northern Pacific corner served as a good lesson towards this end.

XXIX. POOLS AND MANIPULATION.

A great deal of the speculation on the New York Stock Exchange is artificial. By this I mean that it fails to reflect the actual transaction in securities by the trading public. Such artificial speculation aims to incite, through a display of activity, a buying or selling movement in certain securities and then leaves the attainment of its purpose to the impetus such efforts have started.

A number of brokers will often organize what we call a pool, to exploit certain stocks. Many such pools are constantly operating in the stock market, especially when the trading is active. These pools work with great cleverness. They pull their strings behind the scenes and only the shrewdest market observers can trace their operations.

Only when some cog in their plans slips, as occurred in the case of the Columbus & Hocking Coal & Iron pool, does the public get any inkling of how pools operate and then when their operations become known, the revelations do not always reflect credit upon the Stock Exchange.

What happened to the Columbus & Hocking Coal & Iron pool was this: The members of this pool, after they had succeeded in rigging the price of the company's stock to over $90 a share, and they began to suspect that the public could not be induced to buy their stock at fancy prices, grew apprehensive about how they were to get rid of their holdings, and to get out whole, started to betray one another in their selfish desire to protect themselves. When this treachery become known, there was a sudden rush to sell and within a few minutes the pool was smashed. The stock, which only an hour before had been quoted around $90, declined rapidly and did not stop until it touched a price around $10 a share. Two Stock Exchange firms which were

financing the pool failed, while James R. Keene, the pool's manager and manipulator, lost not only a big slice of his fortune, but a goodly part of his reputation likewise.

To be successful, a pool must sell its accumulated holdings to the public at a profit, but in this it does not always succeed, since the public is at times too wary to be caught.

An amusing instance showing what strange effects can sometimes be brought about by a slight mishap in orders given by a pool, occurred in 1910 in the preferred shares of the Rock Island Company. It seemed that on the night before this incident happened, a leading operator in this stock, who was managing this pool, placed large buying orders in the stock with different Stock Exchange members, but forgot at the same time to give enough selling orders to balance the fluctuations in the stock so as to make them appear normal and not arouse any suspicions. What took place was startling. The simultaneous appearance of these large buying orders without any offerings of the stock, resulted in a sky-rocket advance of $30 a share in the price in less than fifteen minutes and when it became known that a serious blunder had been made in the distribution of the orders, there was a foot-ball rush to sell, the stock sliding back quickly to the price from which it had started but a quarter of an hour previously. The error ever after put the stock under suspicion. The public would have none of it and for months afterwards Rock Island shares were carefully shunned by speculators.

The way pools operate is interesting. A group of Stock Exchange members will agree to form a pool, which in some instances they call a syndicate, to provide a more dignified tone to their scheme. Pools are not always formed by members; they may be organized by speculators as well who in no way are affiliated with the Stock Exchange. Each member of the pool agrees to handle a certain amount of the stock in which the pool is interested and these orders are distributed at scale prices over a certain period of time.

In this manner efforts are made to induce activity towards whatever direction, up or down, the pool plans. If the pool's plans are successful and it has succeeded in distributing at a profit what stock was purchased, or has covered what stock was sold short at a profit, a distribution is made among the members.

Sometimes a pool makes enormous profits. The losses are equally great where a pool's plans meet with defeat. A powerful pool was organized in United States Steel common stock in 1907, in the midst of the panic. This pool, fortified with millions of capital and aided, as some authorities claim, by the Steel Corporation itself, which through its charter is empowered to deal in its own securities, persistently bought all the stock coming upon the market. This buying kept United States Steel common stock like a rock, withstanding all pressure, around $20 a share throughout these parlous days.

The firmness in the price of the stock had the desired influence when confidence and reason again returned. The strength of United States Steel common stock was a topic that was on every one's lips and firmly implanted in the public's mind. The stock became the popular speculative medium and steadily advanced in market value until it touched a price near $95 a share. In the interval, the rise in the stock was assisted by a number of increases in its dividend. The millions the pool had to use to support the stock were multiplied a number of times by the advance in its value which followed.

In some financial quarters pools and their purposes are justified by the claim that the public will not notice a security, irrespective of what merit it possesses, unless there is some leadership and it is such leadership they aim to supply.

Probably there is some logic in their contention. Yet not all pools are organized on such a praiseworthy plan. Quite often they are formed to inveigle the trading public with some security at prices wholly out of proportion to

their intrinsic values. Most of the criticism involving the New York Stock Exchange in recent years may be directly traced to operations of this character.

Pools are largely responsible for the manipulation in stocks, about which so much is written and which is so frequently mentioned in the financial reviews in the daily press. The weight of their orders makes a stock rise or fall and often to such an extent as to frighten real holders to throw their shares onto the market or cause a scurrying to buy in anticipation of a good advance. Pools work upon the avarice and credulity of the public or on its fears.

Before Governor Hughes of New York State appointed a committee of citizens to investigate the operation on the Stock Exchange with the purpose of recommending reforms for the protection of the public, pools were allowed to carry on their manipulations with almost no restraint whatever. While "wash" sales and "matched" orders were not openly tolerated, they were secretly connived at and permitted.

"Wash" sales are sales where two or more members get together to buy or sell stocks between themselves to establish quotations so that they may be reported in the official transactions of the Stock Exchange. This is also true with "matched" orders, which is but another name for "wash" sales. One broker will have an order to buy one hundred shares or more at a certain price and another broker an order to sell a similar amount of stock at the same price, each order emanating from the same source. The public, unaware that these orders are artificial, accept them as actual transactions.

But this sort of deception is now largely a thing of the past as a result of the investigation made by Gov. Hughes' committee. Another practice, now forbidden, is the one by which a member was allowed to bid for or offer a certain price for a large block of stock, but did not have to execute the order unless exactly the amount of stock his order called

for was offered, or taken, at his price. This practice allowed a member to bid $160 for a block of 10,000 shares, all or none, when the price was only $150, very well knowing beforehand that no other member could fill his order. Orders like this were mere bluffs made ostentatiously to impress the public. Now a member, whatever he makes a bid, must take stock in whatever blocks it is offered and this, of course, negatives the sort of manipulation just described and which is designed to deceive the public.

All manipulation, however, does not spring from pool operations. Some of it is caused by large underwriting bankers who in bringing out an issue of new securities listed on the Stock Exchange, bring about an advance in the price of the already outstanding securities in order to create a good impression for their prospective financing and secure for it a successful reception on the part of the public, which is more likely to be keen for anything indicating a likelihood of a quick profit.

On the floor of the Stock Exchange are arranged rows of posts, around each of which gather the traders who trade in a certain security. To facilitate the trading, each member selects some stock of which he wishes to make a specialty and makes his headquarters while on the floor at the post allotted to his security. As examples, one member acts as specialist in Reading Railroad stock, another in Union Pacific shares and so on. For the more active shares there may be a number of specialists. They execute orders in their specialties for a commission of $2 for each one hundred shares when the orders are from fellow members. In this way members are saved a good deal of running about on the floor of the Exchange and also considerable of their time.

But the specialists in the more inactive shares are often subjected to severe criticism. They are in a position to make considerable money if not over-scrupulous. They are in a position to execute an order of their own before that of

a customer. For example, a customer gives a market order to sell 100 shares of an inactive stock. The specialist could, were he so inclined, break the price three or four points and buy in the stock his customer sold. To the next buyer who came along he could sell this very same stock at an advance of two or three points, making not only his commission from both seller and buyer but also the difference in price. I don't say that this is done, but contend it can be done and believe that among the much needed reforms should be more stringent supervision over the specialists in the more inactive securities.

Some of the Pitfalls of Speculation.

I cannot attempt to elaborate upon the many different pitfalls dug by crafty schemers to catch unwary and ignorant speculators. On this one subject alone a book might be written. The bucket-shops, for one, have proved the principal menace to the public but fortunately they no longer exist to the great extent they once did, now that the Government has gone after them with a big stick. A bucket-shop, as already described, is nothing less than a gambling room. Bucket-shops can only carry on a prosperous business by misleading their patrons. This they do by inducing them to take on stocks likely to decline or sell stocks more liable to go up.

It is always to the best interest and protection for a person who wishes to deal in stocks or commodities to carry on his transactions through a member of a regular exchange, as such transactions thus come under the supervision of the members, who are compelled actually to execute all their orders. For a member to be caught "bucketing" orders means his expulsion from any reputable exchange. By dealing with members a patron is also dealing with a person of more or less financial responsibility and one whose commission is sufficient compensation for the services he performs. Moreover, it is possible for a customer, when

transacting his business through a member, to check his orders from the official records.

"Tips" on the market are the bane of speculators. They prove the ruin of a great many. A speculator will hear from some one about whom he knows nothing and with whom he has scraped up a passing acquaintance in some brokerage office, that such and such a stock is either going up or about to have a big break. He hurries to get in on the "good thing." In most instances such tips are mere guesses. On such flimsy foundations many speculators will sometimes stake a small fortune. Is it then any wonder that they soon lose all their money? Other speculators will pay a weekly or monthly stipend to some advertising tipsters for inside information. The inconsistency of such advice is plainly apparent when it is known that if these self-criers of their ability to forecast prices were only correct about a small part of their prognostications, they could retire in a short while with great big fortunes.

Yet these financial charlatans month after month catch a new crop of suckers; otherwise they could not continue in the game as long as they do.

It is a remarkable phase of human nature that prompts individuals to back with their money the claims of perfect strangers, but when it comes to buying even only a pair of socks they will inspect them closely to be sure they are getting what they bargained for. Still it is true, for, were this not a fact, no such schemes like the 520 per cent Franklin Syndicate operated by a clerk by the name of Miller or the Dean Syndicate or the Storey Cotton Syndicate operated by ex-convicts, could be possible. These were all blind pools, so to speak. They advertised that speculation could be conducted profitably and without loss and would declare out of their supposed operations big weekly dividends. The Franklin Syndicate, while it lasted, paid 10 per cent weekly dividends. They secured some person in a community as a customer and it would not be long before

the dupe would be telling all his neighbors about the fat dividends he was receiving. The result would be that the cupidity of others was aroused and they also fell victims.

Their schemes were simple. The dividends paid came from the money their dupes sent, and not from speculation. In the early stages of the crooked game, the dividends paid did not amount to very much and for every dollar distributed in this way they were sure of ten more coming back. Few of their victims ever got their money back, for they kept sending more money than they received so as to increase their large profits. A day must come when such schemes as these are raided or their operators decide to make a big clean up. Then all their dupes find that they have not been speculating but have been swindled out of their money.

Luckily, such discretionary pools, as they are styled, have ceased to exist. The authorities are now too watchful. But in their place have sprung up individuals who will handle speculative accounts for clients for a share of the profits. They catch their full measure of victims. These people are merely gambling with their clients' money. If they guess rightly, they take a share of the profits; if not, their customers, not they, lose money.

In the first place, no person should speculate who has no knowledge of securities. One must not forget that intrinsic value and possible increase in income return are the moving forces behind a rise in the price of a security, and conversely, a depreciation in the intrinsic value and the likelihood of a reduction in the dividend, are behind a decline in the price of a security.

Such possibilities can be detected only by close study of prevailing conditions and by thorough analysis of the earnings statement, as published by corporations.

In fact, to be successful in speculation a person must devote as close study to conditions as he would to any profession he desires to master.

Speculation is a rich man's pastime, not a poor man's road to fortune. The latter has no business in it. A rich man is in a position to recuperate his losses by patient waiting. If he is a buyer, he can take his securities out of the market, put them away in his strong box and bide his time until they not only recover their price but go high enough so that there is a profit in them for him. If he is seller, he can close his transaction, sell again at a higher level until the decline anticipating takes place. But even then men who adopt this method are not always right in their conclusions.

The most successful speculators are the actual investors who buy their securities outright after a severe break in prices and store them away until a recovery occurs in which they can resell at a profit. They do not buy more than they can well afford to buy and as they own the securities outright they cannot be called upon for margin.

XXX. THE PROMOTER'S PLACE IN FINANCE.

He who proves himself a successful and capable promoter is a very useful individual. As the difficult task falls to him of bringing capital and opportunity together for their mutual exploitation, no one can dispute that such men, when honest in their efforts, really perform a very valuable service when they succeed in raising capital to finance legitimate and meritorious enterprises.

In reality they are the men who find legitimate opportunities in which capital may be profitably employed. Born optimists as they are, they are never at a loss to devise methods of presenting their projects in a form sufficient to interest people of means.

Today, many cities and towns are richer in either new industries, electric light, gas, or water plants, or transportation facilities, because of the efforts of some promoter whose confidence that such ventures would prove profitable, induced him to devote all his time and energies to raise the required capital to start them. Many communities owe their railroad facilities to the same tireless boomers.

But not all promoters are upright and honest. Some are shifty and dishonest and are in the business to plunder investors. Honest promoters are constructionists; they are the men who do things in an honest way, never undertaking any proposition unless they are first thoroughly satisfied it is sound, and then they stick to it until it is a success. The crooked promoter is the reverse; he is an individual who is not only indifferent as to the ultimate outcome of a project, but mercenary, since he has but one purpose always in mind, which is to use his schemes to unload stocks or bonds on investors, caring little whether the securities are sound or not. His schemes are only traps to catch the

money of the public, and are not newly developed opportunities for making money. It is unfortunate that this type of promoter is largely in the majority. Because of their pernicious efforts the business of promoting has in late years come into bad odor, although undeservedly, as it is a line of work that always will be necessary. Men capable of bringing capital and enterprises together will always be required; their services cannot very well be dispensed with.

The legitimate promoter has no brass band to herald him; he works very quietly and unostentatiously. He is a mole who keeps burrowing along without noise. If he is planning a merger of a number of industrial concerns, to bring about greater degree of stability for a certain line of manufacture, he usually starts by obtaining options on the plants and has his plans and statistics showing the possible profits well worked out before he is ready to lay them before capitalists. If he is bent upon building a new railroad or furnishing a community with some very much needed public service, he first has his rights of way or franchises safely tucked in his pocket before undertaking to raise the necessary capital. He never begins half-way, as he realizes the futility of attempting to induce large capitalists to finance his projects unless he is in a position to fulfill every promise he makes.

Furthermore, a promoter who has a good money-making opportunity and is intelligent enough to present it properly, usually experiences no difficulty in finding capital for it. Capital is hunting him as much as he is seeking it. The promoter, however, whom the public must watch very carefully and be on guard against, is the man who has a half-baked scheme which he wishes investors to finance entirely and take all the chances. He may not exactly be a knave, but simply a fool who imagines he has a good thing and believes he can raise enough money to exploit it by a direct appeal to the multitude of investors. Whether he is a knave or a fool, the result to the investor in the end is equally

disastrous, if enough capital is not raised. All those then who have backed the promoter's confident promises with their capital, lose it when the critical period is reached, when more capital is required, but can no longer be obtained.

Every year hundreds upon hundreds of such ventures succumb, for from their inception they never really have a chance to demonstrate what they are capable of accomplishing, merely through lack of sufficient capital.

The intelligent and successful promoter guards against such a contingency. He usually deals with wealthy capitalists and large underwriting bankers who are prepared to pledge all the necessary capital to insure the completion of the project before inviting investors to participate. They at least go to all lengths to be sure of their ground. It was in this way the steel merger, copper merger, and a dozen other well-known mergers were organized by shrewd promoters. Their securities may have been watered, but at least they always had a market.

Criticism may properly be directed at this watered capital, but it must be said in behalf of the original promoters that the holders of their stocks could realize something on them whenever they wanted to sell. As much cannot be claimed for the stocks of the number of shifty schemes exploited during the last twenty years, by means of flamboyant and extravagant newspaper advertising. To mention the names of all of them would alone require a book as bulky as an Encyclopedia Britannica. Most of the securities issued by these schemers are now worthless. What money the public invested in them has been completely lost.

Only one general rule can be suggested by which an investor may judge the standing of a promoter who is endeavoring to enlist capital. That rule is to find what is the promoter's reputation in the financial community—whether he has any previous successes to his credit, never to accept his mere statements as facts, but compel him to furnish a

complete financial report which will show how much capital his project will require and then what assurances he can give that he will be able to raise it all.

By an investigation of his character it is possible to learn whether the proposition is of a substantial character, or the promoter is simply trying to raise a large amount of capital "on a shoe string." Other than this there are no specific rules. There are so many different ventures constantly being brought out and such a great variety in the plans adopted to raise capital, that each proposition must be judged individually and according to its merits.

Listed and Unlisted Securities.

We hear considerable pro and con about listed securities. The subject is very much discussed not only wherever security buyers congregate, but frequently in the financial columns of the newspapers. The most convincing argument brought forward by champions of listed securities is that the latter have a market. That is to say, they can be sold when it comes necessary to sell them. Their point is that individuals, when they make an investment, wish to be in a position where they can always sell what they buy. Then they also contend that it is much easier to obtain loans upon securities listed on some Exchange. But fallacy is to be found in all their arguments.

Standard Oil shares are not listed on the Stock Exchange. This security is traded in on the open market and there is not the least difficulty experienced in quickly finding a buyer, should one wish to sell the stock, nor will a person be turned out of doors by any banker if he wishes to borrow any money, as there is no more desirable collateral for a loan than the shares of the Standard Oil Co. There are any number of other desirable stocks in a similar position, although they are not listed. A few which might be mentioned are Royal Baking Powder, Singer Sewing Machine, American Typefounders, Otis Elevator, Borden's Condensed Milk, and so on.

In the final analysis, it is not whether a stock is listed or not which gives it marketability, but its intrinsic merit as an investment. This is what the buyers of stocks first consider, and quite properly. Furthermore, this element is also what bankers first seek to determine when making loans or at least they should do so. If a corporation is doing a large business, has for years paid good dividends and continues to pay them, then it should not be difficult to sell the stock when the occasion to do so arises, or to borrow money upon it.

Listed stocks are decidedly at a disadvantage with nervous security holders, for any extreme fluctuations in their prices might prompt them on the spur of the moment and without thinking, to sell when they should not, or buy when they ought to let them alone.

There are also many securities listed on the Stock Exchange, which, so far as commanding a ready market, might as well never have been there, so inactive are they. Nor is this to their discredit. It may be a case, as it often proves, that the shares are so closely held by investors that very little stock comes into the market. The position of the shares of the Eastman Kodak Company of Rochester, N. Y., is an example of this. The stock has paid such a good rate of dividends for years that those who own it are reluctant to part with it. The shares of the express companies, although also listed, are inactive a good deal of the time for the very same reason. There are some listed stocks in which sometimes days will pass without as much as one hundred shares changing hands.

I mention this only to prove that all the advantages are not always with listed stocks. There are a great many equally good securities not on the Exchange which it would be the height of folly for investors to ignore because of the absence from the listing department.

When a person buys a security he is prompted to do so because of its value and prospects. That is the cardinal

principle in making profitable investments and no one will dispute the argument. While I am not decrying the advantages of securities that are listed, I at least cannot see where it is a mistake when a corporation fails to place its securities on the Exchange.

I have been told by directors of corporations that they have refrained from listing their stocks because of a fear that if they did so the stocks would be in danger of being manipulated, where as it is their desire to keep the stocks free from all stock juggling and have them sell strictly upon their merits. In taking this view they are quite right, for nothing will prejudice a security in the opinion of the public more quickly than a suspicion that the fluctuations in its market prices are artificial. There is no way to prevent this being done on the Exchange should some of the brokers conclude they could make a good profit in buying quietly a block of stock and then by a display of strength in the quotations, distribute their stock on a scale of rising prices. After they are through with their maneuvering, the stock might decline rapidly in price to the great impairment of its market position, although nothing has happened to depreciate its intrinsic merits. This is what makes some corporations hesitate to list their securities.

When the Governors of the New York Stock Exchanges devise means to make manipulation extremely difficult, I am inclined to think the hesitancy shown by directors of the smaller corporations to list their stocks will be very largely removed. Towards this end the suggestion has been proffered to prevent brokers from buying stocks for their own account. Whether or not this is practicable is a debatable question.

But as long as a stock has intrinsic merit behind it, returns good dividends and has borne a good reputation, it is immaterial from the investor's viewpoint whether it is listed or not. It is well to remember that that which has value may be sold and money borrowed on it.

Mining, Oil and Other Bonds.

Ever so often it seems to be our misfortune to run into a boom of some kind or other when the popular fancy for investments turns in one particular direction and then discretion and good judgment which sober-minded people are supposed to exercise, are cast aside in a frenzy to gamble. If it is not in mining, then it is for the exploitation of a newly discovered oil field; if it is not for that, then it is something else which has taken hold of the public fancy. It is during such booms that the flotation of new securities reaches its flood tide.

A great many people then appear to be obsessed with but a single idea, to acquire wealth overnight. When popular fancy runs wild for a certain class of securities, it is a harvest time for unscrupulous manufacturers of securities.

Yet this is not a phenomenon exclusively characteristic with us. Nearly every other nation is afflicted more or less at some time or other, with the same sort of wild speculative mania. The phlegmatic Dutch had a black tulip craze when fabulous sums were paid for this bulb. France was turned into a nation of besottened gamblers by John Law with his fanciful Mississippi bubble, and more recently by De Lesseps and Hirsch with their more ambitious Panama Canal scheme. We are inclined to look upon the French as a thrifty race, yet these incidents prove they can be aroused under peculiar circumstances to throw millions away on baubles.

In England such debacles result frequently. While France was royally entertaining John Law and pouring immense riches into his lap to squander, Englishmen were no less shorn of all sober sense in their great greed to get the immense wealth which the South Sea trading enterprises, and there were a half-dozen of them, promised to bring. With the same rash spirit they launched upon the

wildly speculative schemes converging upon the development of the new gold fields of Africa and only recently something approaching a frenzied boom in rubber company shares developed and has since collapsed.

There was a boom in 1849, due to the discovery of gold in California, but our first extensive boom, which is remembered by the present generation, and which reached any large proportions, was the speculation in oil, when the first large oil area in this country was discovered in Pennsylvania. People from all over flocked to the oil district. The early comers made money. Their successes lured others. In this way the fever spread until it ran wild until it died from exhaustion.

The pioneers are the ones who usually make the money in a boom. They are able to do this through the willingness of those who follow to pay fancy prices for their holdings. They, in turn, hand them over to other late comers. The bubble, once started, continues to expand as long as there are people who will take what others have to offer at a good profit, which in boom times attains fanciful proportions. But finally there comes a pause when every one rushes to sell in an anxiety to cash in their paper profits, but buyers are scarce. Then the bottom drops out of the boom, the bubble bursts and property or investments which only a short while before were figured in dollars, are not worth cents. Such, in brief, is the history of booms.

The author distinctly remembers the Texas oil boom, which it was his good fortune to observe at close range from its inception to its collapse. A week after oil was discovered the rush began to the new field. Beaumont, Texas, which was the center of the new field, grew from a small lumber town of not more than 6,000 population to a bustling city of 25,000 people, all this bottomed on a frenzied hunt for wealth. The Lucas Gusher brought this horde of people. It was spouting oil at the rate of 70,000 barrels a day. This excited the imagination of the masses.

Nothing was more easy to estimate than that such a production meant enormous wealth. At fifty cents a barrel the new well was showing a production of $35,000 daily which was all right on paper. If one well could show this, then the profits on a half-dozen would reach enormous proportions. Oil land which could be bought a month before for only a few dollars an acre, jumped by leaps and bounds in price and in a few months was changing hands on the basis of $1,000,000 and over an acre. Derricks were built so close together that it was impossible, in some places, to walk between them.

The outcome was the great over-production of oil, for which there was no market. Oil was soon begging for buyers. The price declined until not more than three cents a barrel was obtainable. But this was not the only mishap to befall the field. The large number of wells drilled on the same spot almost exhausted the field in a year's time. More than a thousand different oil companies were promoted, all with varying capital, from a modest $50,000 to several million dollars. The public invested, it is conservatively estimated, nearly $100,000,000 in actual cash, most of which has been lost, as there are today only a few oil companies compared to the number formerly in this field, and they are largely owned by three or four large corporations.

It is the same with mining. The Cripple Creek, Goldfield, Tonapah and Cobalt booms sucked up one hundred dollars, the money of misguided investors, where it returned one dollar in dividends. Porcupine, the new gold camp in Canada, is likely to repeat history. It is not that these camps lack opportunities for successful exploitation; it is due to the public rushing heedlessly into these things and taking anything offered without investigation, snapping at them like a school of hungry fish at the bait thrown out.

This is what happened also in the great industrial boom following McKinley's inauguration as President in 1897. In those days it seemed that all promoters had to do to induce

the public to pour its money in upon them was to incorporate a company, plan the manufacture of something and arrange in their prospectuses a mass of statistics demonstrating how much money could be made. It is needless to say where things are done thus loosely that the majority of the enterprises never can reach beyond the embryonic stock-selling stage.

XXXI. THE GET-RICH-QUICK LURE.

Until recent years, the Get-Rich-Quick Game had attracted little attention, although it had been an evil in the domain of finance which had slowly but steadily grown for years until it had reached proportions where it had actually become a serious menace to our national prosperity. But it could no longer be ignored. It spread so far that the necessity was forced on the different states and even on our National Government to devise rigid restrictions to check the invasion upon our people made by the multitude of such schemes which have been continuously cropping up.

The Get-Rich-Quick Game, as conducted in this country, is no longer a small factor. President Taft regarded all such schemes as constituting a danger to our prosperity, serious enough to make it incumbent on him to devote a paragraph in one of his recent messages recommending that drastic action be taken against these swindles.

The losses the public sustains through get-rich-quick schemes is enormous. But the greatest harm following does not come to intelligent people, as they are not so easily deluded; by far the larger number of victims is drawn from the humbler classes, the thrifty accumulators of capital, who, being totally ignorant of the first sound principles governing investments, and still anxious to make their money yield the largest income, grasp eagerly at different propositions brought to their attention because they promise enormous returns.

The amount which credulous investors lose each year in our many different Wallingford schemes to acquire wealth overnight and on a few hundred dollars, cannot be estimated accurately. Still, I believe I am not exaggerating, but underestimating the total loss, when I place the amount be-

tween $150,000,000 and $200,000,000 every year. This certainly is a huge amount of capital to throw away upon ventures which never have had a ghost of a chance to succeed from their very inception, because they were conceived at the start in the womb of dishonesty.

I was asked some months ago by Mr. C. M. Keys, the financial editor of World's Work Magazine, to prepare some statistics of the more prominent get-rich-quick fakes foisted on American money savers during the last few years. In the preparation of these statistics I went no further back than seven years and included only such schemes which emanated principally from the eastern financial centers.

The statistics I furnished World's Work included forty-two oil companies, with an aggregate capitalization of $83,448,128; one hundred nineteen mining companies with an aggregate capitalization of $527,882,500; and eighty-two companies of a miscellaneous character, with an aggregate capitalization of $448,269,780. This list was only a partial one and included only such schemes still fresh in the public's mind. Where one was mentioned there were two score or more unnamed, because space to include them was not available.

Yet here in this incomplete list we see a total capital in excess of one billion dollars, of which but an infinitesimal part actually went into the development of these enterprises; the larger part drifted to the pockets of dishonest promoters, went for flamboyant advertising in the not over-scrupulous newspapers, or was squandered on large commissions to stock salesmen and their sub-agents. All the millions investors threw in these schemes proved a total loss. A country cannot long continue to prosper which will tolerate the snuffing out of so much of its available capital each year.

The Get-Rich-Quick Game is a convenient blind for the high-class confidence man to hide behind. Until the authorities, following the lead of the National Government, be-

came aggressive and made up their minds that it was high time to stop this form of brazen plunder, crooks and crafty promoters found the occupation of despoiling the masses from such vantage points as fiscal agents, fake bankers and brokers extremely congenial, nor were the risks they assumed great. Compared to them, hold-up men were individuals of some courage, for they at least always invited danger from a counter-attack when they assaulted wayfarers to get their booty. The get-rich-quick shark was seldom in danger from physical violence, for if one of his victims came to seek him out in his office to force him to return his plunder by physical persuasion, he was never to be found around.

The get-rich-quick schemer works along clever lines. He acquires mining claims or a lease on some oil property somewhere near where a real boom is on and at once starts a company, capitalizing it for a large amount, or he may get hold of some new invention, like the wireless telegraph, or the wireless telephone, and subject them to the same process of inflation. This preliminary step taken, he next proceeds to have stock certificates and attractive literature printed, promising profits ranging from two hundred to as many thousand per cent. Then he is ready for his work of plucking investors of all the money they can spare.

One of their effective schemes is to offer their stock at a low price, much under its par value. They fix on a low price the better to convince their dupes with their plausible arguments that the investment will rapidly advance in value. In many instances, they hold forth promises that their stock will reach a price far in excess of its par value as soon as their enterprise begins to pay large dividends, which are never declared unless fake payments are made and then they are used merely as a bait to be withdrawn later on.

The difference in the price at which a victim may buy stock and what it is sure to reach, according to the promoter, is represented to him as the profits he can easily make. The

profit is so vastly in excess of what it is possible for conservative investments to return that the lure catches ignorant and greedy investors, but not intelligent people, who will investigate thoroughly before biting on the mere promises made by people entirely unknown to them.

Another scheme adopted by get-rich-quick operators is to announce an advance in the price of the stock and urge that it be bought for the profit which can be made from the increase in its market value; this is what they all say. If a stock is offered for ten cents a share and will be advanced to 20 cents a share, it is pointed out that the investor will make 100 per cent. This snare catches a great many victims. The stock has not advanced one mill in value; all that has taken place is that it has been arbitrarily marked up in price. If any effort to sell the stock were made by an investor, he would find out that, virtually, there was no genuine market for its sale.

All sorts of efforts are made to secure the consent of men having some reputation to act as directors for get-rich-quick schemes; some are innocently drawn into the game through an honest belief that it is a good thing and certain of success; others, again, act for a more mercenary purpose, giving their services in return for a salary or a big block of stock which they expect to sell at a profit.

There is a telegraph company whose stock is widely exploited by a concern in the East, which borders as near to a disreputable promotion as it is possible to get without its authors breaking into the penitentiary, for which a number of very well-known public men are acting as an advisory board and among whom is a famous divine. Yet not one of these men ever attended a meeting of the company. They have consented to act as an advisory committee upon the plea of others that their presence will be a guarantee that the enterprise will be free from stock jobbery. The general reputation of these men is proof of their integrity; they are the innocent cat's-paws of crafty promoters behind the

scheme, who use their names and high character to inveigle the public into buying the stock. This is by no means an isolated case. There are any number of similar illustrations which could be given. Get-rich-quick promoters are fully aware of the power the names of reputable men have upon the purse strings of credulous investors and they employ every means to secure such men as directors in their enterprises.

Sometimes it occurs that men in good repute will believe they have a good thing. Likely they have, but unfortunately they fall among the crooks in finance who enamor them with promises of quickly raising all the capital to develop their enterprises and ruin them in a short while by their dishonest operations. This often happens. I remember a legitimate industrial enterprise which fell among the financial Philistines who robbed it from all sides and finally forced it into bankruptcy. After that experience it was impossible to raise any money for it.

If a fake advance in the price of a stock fails to entrap victims, then fraudulent dividends are tried. The backers of get-rich-quick schemes are never at a loss to spring any coup if it will suffice to bring them money. They will guarantee to buy stock back within a certain time at a higher price, if that will catch a sucker, with no intention of living up to their promises, and as they are financially irresponsible it is useless to start any legal action against them, as no money could be recovered after once they obtain a strangle hold upon it.

A few years ago some get-rich-quick mining promoters devised, so they claimed, a plan for a guaranty against loss. The scheme consisted of a trust fund into which were deposited a certain number of shares in each of the companies they promoted. It was a sort of grab box. If the investor was dissatisfied with one stock he had purchased because it did not pay dividends or advance in price quickly enough, he could turn his stock into this depository and take out

some other stock which he fancied the more. As all the stocks were equally worthless there was no protection against loss. Still it was a good argument and had a good effect while the scheme still had the flavor of novelty.

When this plan wore out its welcome, fake bonding companies were started. These companies guaranteed to repay the investor in twenty years, some in ten years, all the money they had paid for a stock, if in the meanwhile it did not prove profitable, but a failure. This also sounded convincing but none of these bonding companies was ever solvent or could ever live up to its guarantee. After the authorities closed up a number for operating an illegal business, all the others disappeared quickly.

As already related in previous sections, the Government has been carrying on a vigorous campaign to rid the country of fraudulent financial schemes, including the innumerable get-rich-quick ventures. The Government is in the best position to carry on this work very effectively. Such schemes cannot succeed unless they are allowed the free use of the mails, as it is by means of the mails the promoters try to reach investors and to catch them in their claws. By branding them as frauds and denying them the use of the mails, these fakers cannot very well succeed.

Still this is a slow process of extermination, as it requires an investigation in each case, sometimes extending over months before any retaliatory action can be taken. In the meanwhile considerable mischief can be done, for the get-rich-quick schemer is a shifty individual. He does not believe in procrastination; he fully appreciates that it cannot be long before his ventures must attract unfavorable notice and therefore he wishes to gather in his loot before he is smoked out. Nor does he stay long with any one scheme, but transfers his activities noiselessly and rapidly from one to another. Often the same crooked individual, before he lands behind the bars, has foisted on his dupes a dozen or more get-rich-quick ventures. One of them promoted as many as

forty-six companies before the Government caught him, each one of which was an out and out fraud.

In the get-rich-quick business, "the sucker list" plays a very important part. This list is made up of names of people who are known to bite at worthless truck. Such people are the "suckers." These "sucker" lists are graded. In one raid by the Government of the offices of one get-rich-quick concern, there was found a card index list of "suckers" marked according to their measures of credulity "good," "fair" and "worth trying."

Once a person writes for literature to any one of these harpies he is for years afterwards tagged as a "sucker." From then on he will be bombarded with all kinds of literature from all the get-rich-quick sharks, everyone of whom is exceedingly anxious to make him wealthy without any effort on his part. His name is peddled from one to another. His name is bandied about or sold, as a large business is done among promoters with "sucker" lists, a name bringing all the way from one cent to one dollar, according to its possible value as a source of good plucking.

Hundreds of people are impoverished every year by get-rich-quick schemes. It is surprising to what extent a mania for worthless stocks siezes on some classes. I remember an instance where a western court was compelled to appoint a guardian for one man in order to keep intact the remainder of his fortune, which at one time was quite large, and save it from being entirely squandered on get-rich-quick stocks. This deluded individual had bought liberally of stocks in every fake to which his attention was called until he had thrown away nearly $300,000. When he was asked why he did it, he said he felt that among the many stocks he had bought a number would prove very successful, so much so, that they would more than double what losses he had sustained in the worthless investments.

This is a theory obsessing a great many persons. They proceed on the belief that if one out of twenty stocks even

partially realizes the profits claimed for all, they will be so rich they can afford to lose on the other nineteen. The twentieth, the good thing, somehow never comes up to their measure.

It has been suggested that an effective curb could be placed upon this evil by the Government, compelling every enterprise offering its stock to the public to take out a national charter providing as its principal requirement the filing under oath with the Secretary of the Treasury of a complete statement of its financial condition, which statement would be open to public inspection or a copy could be obtained by an investor for a nominal sum. It is claimed, and not without reason, that such publicity would very quickly develop any fraud if it existed and enable the Government to stop any further stock sale until an investigation disproved the charges.

The idea is a very good one. It would be even more effective were all the directors forced to acknowledge under oath the genuineness of the financial statement filed and if it were further provided that any perjury or false swearing was punishable with a jail sentence, instead of a fine. Then it is likely individuals who valued their good names would use the proper precautions not to carelessly connect their names with any fraudulent promotion.

Still no investor is in danger of falling a prey to a dishonest or visionary promotion if common sense is exercised. By inquiring into the character of the people promoting the venture and by getting a financial statement, they will in a large measure protect themselves. Even should they not feel themselves competent to judge, which in itself suggests they ought to be doubly careful of what they take hold of, then they should consult some reputable newspaper or banker. These latter would only too willingly advise them sincerely of their danger, if any existed. Ignorance alone is responsible for two-thirds of the money losses in investments. Ignorance canont be protected unless it alone seeks the protection.

FOREWORD.

"People will endeavor to forecast the future and make agreements according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable."—Judge Holmes in a U. S. Supreme Court Decision.

"A study of past disturbances leads to the conviction that no severe depression has occurred which was not preceded by loud warnings. These warnings ought not to pass unheeded and in order to recognize them promptly, it is necessary that accurate statistics be furnished. Much improvement has been accomplished in the last few years, though it is to be regretted that so much of our statistical information is fragmentary or inaccurate. Official and private publications furnish much valuable information. . . . . Other statistics, which are inadequate or lacking and which would be of great value, are those pertaining to the employment of labor, capital invested in new enterprises, amounts expended in new construction, volume of production in the various kinds of manufactures, and statistics of state banks and savings institutions similar to those pertaining to national banks. After making due allowance for the insufficiency of statistics, it must be said that the failure to pay sufficient attention to those already available is equally to be regretted."—Senator Theodore E. Burton.

PART II.
GENERAL PRINCIPLES OF INVESTMENT.

BY GEORGE GARR HENRY.

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With the immense increase in wealth in the United States during the last decade and its more general distribution, the problem of investment has assumed correspondingly greater importance. As long as the average business man was an habitual borrower of money and possessed no private fortune outside of his interest in his business, he was not greatly concerned with investment problems. The surplus wealth of the country for a long time was in the hands of financial institutions and a few wealthy capitalists. These men, the officers and directors of banks, savings-banks, and insurance companies, and the possessors of hereditary wealth, were thoroughly equipped by training and experience for the solving of investment problems and needed no help in the disposition of the funds under their control. During the last ten years, however, these conditions have been greatly altered. The number of business men today in possession of funds in excess of their private wants and business requirements is far greater than it was ten years ago, and is constantly increasing. These men are confronted with a real investment problem.

While they have not always recognized it, the problem which they are called upon to solve is really twofold—it concerns the safeguarding of their private fortune and the wise disposition of their business surplus. They have usually seen the first part of this problem, but not all have succeeded in clearly understanding the second. When the treatment of a man's business surplus is spoken of as an investment problem, it is meant, of course, not his working capital, which should be kept in liquid form for im-

mediate needs, but that portion of his surplus which is set aside for emergencies. It is coming to be a recognized principle that every business enterprise of whatever kind or size should establish a reserve fund. It is felt that the possession of a reserve fund puts the business upon a secure foundation, adds to its financial strength and reputation, and greatly increases its credit and borrowing capacity. The recognition of this fact, combined with the ability to set aside a reserve fund, has brought many men to a consideration of the best way in which to dispose of it. It is obviously a waste of income to have the surplus in bank-accounts; more than that, there would be a constant temptation to use it and to confuse it with working capital. Its best disposition is plainly in some safe interest-bearing security, which can be readily sold.

Confronted with the double problem thus outlined, what measure of success has attended the average business man in its solution?

It is safe to say that the average man has found it easier to make money than to take care of it. Money-making, for him, is the result of successful activity in his own line of business, with which he is thoroughly familiar, while the investment of money is a thing apart from his business, with which he is not familiar, and of which he may have had little practical experience. His failure to invest money wisely is not due to any want of intelligence or of proper care and foresight on his part, as he sometimes seems to believe, but simply because he is ignorant of the principles of a business which differs radically from his own.

The investment of money is a banker's business. When the average man has funds to invest, whether he be a business man or a pure investor, he should consult some experienced and reliable investment banker just as he would consult a doctor or a lawyer if he were in need of medical or legal advice. This book is not intended to take the place of consultation with a banker, but to supplement it.

The advantage of such consultation is shown by the fact that if a man attempts to rely on his own judgment, he is almost certain not to do the best thing, even if his business instinct leads him to avoid those enterprises which are more plainly unpromising or fraudulent. It should be remembered, however, that widows and orphans are not the only ones ensnared by attractive advertisements and the promise of brilliant returns. In most cases, widows' and orphans' funds are protected by conscientious and conservative trustees, and it is the average business man who furnishes the money which is ultimately lost in all propositions which violate the fundamental laws of investment.

The average man is led into these unwise investments through a very natural error of judgment. Accustomed to take reasonable chances and to make large returns in his own business, he fails to detect anything fundamentally wrong in a proposition simply because it promises to pay well. He forgets that the rate of interest on *invested money*, or pure interest, is very small, and that anything above that can only come as payment for management, as he makes in his own business, or at the sacrifice of some essential factor of safety which will usually lead to disaster.

For the successful investment of money, however, a good deal more is required than the mere ability to select a safe security. That is only one phase of the problem. Scientific investment demands a clear understanding of the fundamental distinctions between different classes of securities and strict adherence to the two cardinal principles, distribution of risk and selection of securities in accordance with real requirements.

One of the most important distinctions is that between *promises to pay* and *equities*. Bonds, real-estate mortgages, and loans on collateral represent somebody's promise to pay a certain sum of money at a future date; and if the promise be good and the security ample, the holder of the promise will be paid the money at the time due. On the other hand,

equities, such as the capital stocks of banking, railway, and industrial corporations, represent only a certain residuary share in the assets and profits of a working concern, after payment of its obligations and fixed charges. The value of this residuary share may be large or small, may increase or diminish, but in no case can the holder of such a share require any one, least of all the company itself, to redeem the certificate representing his interest at the price he paid for it, nor indeed at any price. If a man buys a $1,000 railroad bond, he knows that the railroad, if solvent, will pay him $1,000 in cash when the bond is due. But if he buys a share of railroad stock, his only chance of getting his money back, if he should wish it, is that some one else will want to buy his share for what he paid for it, or more. In one case he has bought a *promise to pay*, and in the other an *equity*.

It is not the intention, from the foregoing, to draw the conclusion that *equities* under no circumstances are to be regarded as investments, because many of our bank and railroad stocks, and even some of our public-utility and industrial stocks, have attained a stability and permanence of value and possess sufficiently long dividend records to justify their consideration when investments are contemplated; but it is essential that the investor should have a thorough understanding of the distinction involved.

The principle of distribution of risk is a simple one. It involves no more than obedience to the old rule which forbids putting all one's eggs in the same basket. The number of men who carry out this principle with any thoroughness, however, is very small. Proper distribution means not only the division of property among the various forms of investment, as railroad bonds, municipals, mortgages, public utility bonds, etc., but also the preservation of proper geographical proportions within each form. Adherence to this principle is perhaps not so important for private investors as for institutions. A striking instance of the need

for insistence upon its observance in the institutional field was furnished by one of the fire-insurance companies of San Francisco after the earthquake. It appeared that the company's assets were largely invested in San Francisco real estate and in local enterprises generally, where the bulk of its fire risks were concentrated. As a result, the very catastrophe which converted its risks into actual liabilities deprived its assets of all immediate value. This instance serves to show the importance of the principle and the necessity for its observance.

The principle of selection in accordance with real requirements is more complex. It involves a thorough understanding of the chief points which must be considered in the selection of all investments. These are five in number: (1) *Safety of principal and interest,* or the assurance of receiving the principal and interest on the dates due; (2) *rate of income,* or the net return which is realized on the actual amount of money invested; (3) *convertibility into cash,* or the readiness with which it is possible to realize on the investment; (4) *prospect of appreciation in value,* or that growth in intrinsic value which tends to advance market price; and (5) *stability of market price,* or the likelihood of maintaining the integrity of the principal invested.

The five qualities above enumerated are present in different degrees in every investment, and the scientific investor naturally selects those securities which possess in a high degree the qualities upon which he wishes to place emphasis. A large part of the problem of investment lies in the careful selection of securities to meet one's actual requirements. The average investor does not thoroughly understand this point. He does not realize that a high degree of one quality involves a lower degree of other qualities. He may have a general impression that a high rate of income is apt to indicate less assurance of safety, but he rarely applies the same reasoning to other qualities. When he buys securities, he is quite likely to pay for qualities which

he does not need. It is very common, for example, when he wishes to make a permanent investment and has no thought of reselling, to find him purchasing securities which possess in a high degree the quality of convertibility. From his point of view, this is pure waste. A high degree of convertibility is only obtained at the sacrifice of some other quality—usually rate of income. If he were to use more care in his selections, he could probably find some other security possessing equal safety, equal stability, and equal promise of appreciation in value, which would yield considerably greater revenue, lacking only ready convertibility. Thus he would satisfy his real requirements and obtain a greater income, at the expense only of a quality which he does not need.

The quality of convertibility divides investors into classes more sharply than any other quality. For some investors convertibility is a matter of small importance; for others, it is the paramount consideration. Generally speaking, the private investor does not need to place much emphasis upon the quality of convertibility, at least for the larger part of his estate. On the other hand, for a business surplus, ready convertibility is an absolute necessity, and in order to secure it, something in the way of income must usually be sacrificed.

Again, some investors are so situated that they can insist strongly upon promise of appreciation in value, while others cannot afford to do so. Rich men whose income is in excess of their wants, can afford to forego something in the way of yearly return for the sake of a strong prospect of appreciation in value. Such men naturally buy bank and trust-company stocks, whose general characteristic is a small return upon the money invested, but a strong likelihood of appreciation in value. This is owing to the general practice of well-regulated banks to distribute only about half their earnings in dividends and to credit the rest to surplus, thus insuring a steady rise in the book value

of the stock. Rich men, again, can afford to take chances with the quality of safety, for the sake of greater income, in a way which poor men should never do. In practice, however, if the writer's observation can be depended upon, it is usually the poor men who take the chances—and lose their money.

In the quality of safety, there is a marked difference between safety of principal and safety of interest. With some investments the principal is much safer than the interest, and *vice versa.* This can best be illustrated by examples. The bonds of terminal companies, which are guaranteed as to interest, under the terms of a lease, by the railroads which use the terminal, are usually far safer as to interest than as to principal. While the lease lasts, the interest is probably perfectly secure, but when the lease expires and the bonds mature, the railroads may see fit to abandon the terminal and build one elsewhere, if the city has grown in another direction, and the terminal may cease to have any value except as real estate. On the other hand, a new railroad, built in a thinly settled but rapidly growing part of the country, may have difficulty in bad years in meeting its interest charges, and may even go into temporary default, but if the bonds are issued at a low rate per mile and the management of the road is honest and capable, the safety of the principal can scarcely be questioned.

Stability of market price is frequently a consideration of great importance. This quality should never be confused with the quality of safety. Safety means the assurance that the maker of the obligation will pay principal and interest when due; stability of market price means that the investment shall not shrink in quoted value. These are very different things, though frequently identified in people's minds. An investment may possess assured safety of principal and interest and yet suffer a violent decline in quoted price, owing to a change in general business and financial conditions. In times of continued business

prosperity very high rates are demanded for the use of money, because the liquid capital of the country, to a large extent, has been converted into fixed forms, in the development of new mines, the building of new factories and railroads, and in the improvement and extension of existing properties. These high rates have the effect of reducing the price level of investment securities because people having such securities are apt to sell them in order to lend the money so released, thus maintaining the parity between the yields upon free and invested capital.

As an illustration of this tendency, within the last few years New York City $3\frac{1}{2}$ per cent bonds have declined from 110 to 90, without the slightest suspicion of their safety. Their inherent qualities have changed in no respect except that their prospect of appreciation in quoted price has become decidedly brighter. Their fall in price has been due to two factors, one general and the other special—first, the absorption of liquid capital and consequent rise in interest rates, occasioned by the unprecedented business activity of the country, and, second, to the unfavorable technical position of the bonds, due to an increased supply in the face of a decreased demand.

It will be seen that the question of maintaining the integrity of the money invested is a matter of great importance and deserves to rank as a fifth factor in determining the selection of investments, although it is not an inherent quality of each investment, but is dependent for its effect upon general conditions. If it is essential to the investor that his security should not shrink in quoted price, his best investment is a real-estate mortgage, which is not quoted and consequently does not fluctuate. For the investment of a business surplus, however, where a high degree of convertibility is required, real-estate mortgages will not answer, and the best way to guard against shrinkage is to purchase a short-term security, whose approach to maturity will maintain the price close to par.

The foregoing comments, in a brief and imperfect way, serve to indicate the main points which should be considered in the selection of securities for investment. The main lesson which it is sought to draw is the necessity that a man should have a thorough understanding of his real requirements before he attempts to make investments. For a private investor to go to a banker and ask him to suggest a security to him without telling him the exact nature of his wants is about as foolish as it would be for a patient to go to a physician and ask him to give him some medicine without telling him the symptoms of the trouble which he wished cured. In neither case can the adviser act intelligently unless he knows what end he is seeking to accomplish.

It is plainly impossible within the limits of a single volume to consider the needs of all classes of investors. Special attention will be paid to the requirements of a business surplus and of the private investor. In the field of private investment two distinct classes can be recognized—those who are dependent upon income from investments and those who are not. Both classes must be considered. For the investment of a business surplus, safety, convertibility, and stability of price are the qualities to be emphasized; for investors dependent upon income, safety and a high return; and for those not dependent upon income, a high return and prospect of appreciation in value. In the various articles contained in this volume, bonds, mortgages and stocks of different kinds are considered in turn, their advantages and disadvantages analyzed, and their adaptability to the requirements of a business surplus and of private investment discussed.

SAFETY AND SECURITY.

BY JOHN MOODY.

[Author of "The Truth About the Trusts"; Editor of "Moody's Manual of Railroad and Corporation Securities," etc.]

Unless he has had much previous experience, the prospective investor who wishes to put his money at work through Wall Street channels, will be confronted at the outset with the questions of "safety" and "security." Knowing only more or less definitely that he ought not to expect a return of more than 4 to 5 per cent, if he wishes to invest his money securely, he naturally seeks more expert advice from a banker, broker or general dealer in investment securities. And he is wise in doing this, provided he exercises good judgment in the selection of the broker or dealer. But brokers and dealers in investment securities are, of course, not infallible; their judgment is sometimes biased, and they may, for one reason or another, give unsound advice. Hence, it is all the more necessary that the investor should inform himself regarding the merits of a given security, as well as train himself in the art of analyzing investments in general.

The truth is, that while there are certain fixed rules for proper guidance, every bond must be judged by itself in order to be analyzed correctly. For instance, a man may be advised to invest only in "first mortgages," on the hypothesis that by putting this limitation upon his field of investment, he will thereby insure its safety. But such advice, applied broadly and without qualification, is essentially unsound. A fourth, fifth or tenth mortgage on some properties may be far more secure than a first mortgage on others. For instance, the Reading Company 4s, selling at 104, are a much safer security than were the first mortgage

bonds of the Centralia & Chester R. R., issued in 1895, although the former are an eighth mortgage on parts of the main-line of the Reading system and were originally a first mortgage on no part of the property. Yet they are well secured, while the other bond defaulted early in its life and its holders were obliged to sacrifice a large part of their principal in the reorganization which followed the default. Thus it will be seen that to merely advise the investor to confine his investments to first mortgages may be most misleading.

Another unsafe method of judging the safety of bonds, is to assume that, because they are secured on part of a large railroad system and "underlie" one or more issues of secondary bonds, their security is absolutely assured. This, like the former theory, contains some vital flaws, and while it holds good in the majority of instances, if followed in others, it brings very disastrous results. Many large and important railroad corporations absorb tributary or competing lines under one plan or another, but they do not always guarantee the securities of these lines. Bond issues are frequently "assumed" by a controlling company, according to statements circulated, but unless they have been specifically guaranteed, either by the acquiring corporation or by some other equally responsible concern, it does not necessarily follow that the credit of the latter is back of the security at all. The acquired line may turn out an unprofitable and losing investment, with the result that the larger or controlling line will want either to unload its burden or to scale down the obligations of the branch to a sum approximately less than the latter is currently earning. There are many methods whereby this can be done, as has been proved many times. It is vital, therefore, that the investor should base his entire judgment of value on the property itself, regardless of the parent company, unless indeed the latter has absolutely assumed and guaranteed the principal and interest of the bond.

A third error, which is very common, is to assume that because a bond is listed on one or more of the stock exchanges, it is therefore safer or in better standing than otherwise. Such a notion is entirely unsound, as there are far more bonds of the highest grade and of the best security traded in on the various markets outside of the exchanges themselves. The chief advantage of a security's being listed on an exchange is that it thereby secures a fixed quotation, but the fact of its being listed does not bear upon its safety in any way. While it is true that many of the best secured bonds and stocks are listed on the exchanges, it is also true that many of the least secured are listed as well.

In contemplating an investment in a given security, each case should be judged on its own merits. In the case of a railroad bond, it is not the question of whether the issue is a first mortgage or a blanket mortgage, but whether the value of the property on which it is secured is sufficiently in excess of the amount of the mortgage, and whether the income from the property is sufficiently in excess of the amount required for meeting the interest on the bonds and all prior obligations. And in defining value, we mean, of course, permanent earning power, for it is chiefly the permanent or growing earning power that makes the value. For instance, the New York, New Haven and Hartford railroad lines, between New York and Boston, are bonded and capitalized for an amount far in excess of the cost of replacing the actual movable property of the company. But there are other assets besides rails and equipment which make railroad property valuable. These are its location, its exclusive rights of way and its terminal sites or privileges. It is from these that flows its chief earning power. The six hundred odd miles of railroad in the New Jersey Central system may not represent much more movable property than a like mileage of railroad in Mexico, and may not have originally cost much more to build. But

the vast difference in value will be found in the location, in the value of the land, a value which has been created by the influx or growth of population. This is such an important factor that the value of a property at once appreciates if a tendency towards more rapid growth appears, while it tends to fall in all cases where the contrary tendency develops.*

The rights of way and terminal sites and privileges are therefore the first features to bear in mind in analyzing the earning power, or value. And it must also be borne in mind that it is the permanent, or average, earning power rather than the possible temporary income, which is to be considered. By permanency is meant a matter of generations, rather than years. Most railroad bonds, nowadays, run from forty to one hundred years, and the investor must naturally be assured that there is not likely to be any real depreciation in the property, if properly maintained, in the generations to come. His first thought, then, must be to ascertain if the influx of population around and along the lines of the property promises to continue indefinitely; and at the same time he must determine whether the value of this and the surrounding land is such that the creation of a rival right of way is out of question. In other words, his fundamental asset (the site) must be practically exclusive, for it is the condition of exclusiveness that gives it most of its value.

Having assured himself as to this, his next care will be to see that the probable average earning capacity of the property in the poorest times is well in excess (50 per cent at least) of all requirements for interest on this mortgage and all prior charges, as well as for full maintenance of the property in every respect. The investigation of this phase of the enterprise is frequently a difficult one, as reports and

* This effect of population on land values is brought out most clearly and scientifically in a book recently written by Richard M. Hurd, President of the Mortgage Bond Co., New York, entitled "Principles of City Land Values." Copies supplied by The Moody Corporation, $1.50 each.

income accounts are often so misleading in arrangement and make-up that the careless investor is frequently deceived by an elaborate display of figures which may mean very little.

But even though the investor has thoroughly informed himself regarding the above characteristics, there are many other uncertainties which are to be avoided or overcome. However, if he has been careful to see that the conditions described above are all present in a given investment, his chances of losing his money will be reduced to a minimum. If, on the other hand, he neglects these precautions, and adopts other rules for analyzing the security or puts his trust in the "say-so" of this or that authority, then he stands in great danger of sooner or later coming to grief, as will be shown in the following pages.

Many years ago the careless legislation of many of the states permitted railroad and other corporations to decide for themselves, absolutely without restriction, the amounts of obligations they might put out, and therefore it was no wonder that the privilege was abused, and the making of shares and bonds, the latter represented to be amply secured by mortgage liens, was carried to criminal excess. One illustration will suffice.

The old Arkansas Central Railway Company, located in the State of Arkansas, built only forty-eight miles of its projected road. The road was of narrow gauge, with very light iron, and in every way cheaply constructed. It cost less than ten thousand dollars per mile, including equipment. As has been the case with most companies building railways in new territory, help in its behalf was asked from the communities to be benefited, and their bonds, amounting to nearly half a million dollars, were given it by the counties, cities, etc. Under a statute providing for aid to railroads when their beds could be utilized for levee purposes, the company got $160,000 of state bonds. Under another statute it got, as a loan from the state, the latter's

bonds to the amount of $1,350,000, which were to be a first lien on the property. After such abundant assistance, it would have appeared hardly necessary for the company to put out obligations of its own. However, it proceeded to market and issue its own debentures to the amount of $2,500,000, of which $1,200,000 purported to be secured by first mortgage, a representation that, for reasons already stated, was not correct. In addition, a considerable amount of stock certificates were issued. Altogether, nearly $5,000,000 of paper was put out and negotiated on the basis of forty-eight miles of narrow-gauge road. But this proved to be insufficient. The road, for non-payment of interest on its bonds, soon passed into the hands of a receiver, who found it in such an unfinished state, that with the court's permission, he issued a considerable amount of his own certificates to provide for necessary repairs and betterments. Then the road, the product of such an outlay, was sold at public auction and brought the magnificent sum of $40,000, which was paid, not in cash, but in receiver's certificates that had been purchased at a great discount from their face!

Twenty or thirty years ago, nearly all first-class securities, outside of "governments" and "municipals," were steam railroad bonds and stocks. But we now have stocks and bonds upon the market representing nearly all conceivable kinds of property, industrial and manufacturing companies, telegraphs, telephones, gas, electric light and traction companies, water-works, bridges, oil and gas wells, factories and mills of every description, patent rights of all sorts, steamboat lines, apartment houses, realty enterprises, and even cemeteries. And not only are properties of many kinds used to issue bonds on, but many kinds of bonds are often issued upon the same properties. Thus we find among our railroads and other corporations not only first, second and third mortgages, but income bonds, debentures, convertible bonds, consolidated bonds, redemp-

tion bonds, renewal bonds, terminal bonds, divisional bonds, sinking fund bonds, "blanket-mortgage" bonds, collateral trust bonds, equipment bonds, participating bonds, joint bonds, and bonds ad nauseam, until they lap and overlap in seemingly endless complication. Not that merely, but one issue of bonds is sometimes made the basis of other issues. Indeed, one of the money-making devices of the time is the formation of companies that issue their bonds on the security of the other people's bonds that they have purchased, either yielding a higher rate of interest or obtained at lower prices than they expect to realize for their issues. There seems, in fact, to be no limit to the production of securities that are spread before capitalists and investors. There never was a time when it was so easy to invest money and to lose it. Of the securities that are offered with first-rate recommendations, it is probable that about one-third are actually good, one third have some value, and one-third are practically worthless. Hence the very natural inference that whatever art there may be in the matter of investing is to be exercised chiefly in the avoidance of unworthy offerings, and it is to that point first that a profitable discussion must be mainly directed.

For the condition of things described, the laws of some of our states in giving corporations almost limitless power to issue negotiable paper, as well as in permitting all sorts of companies to incorporate themselves, are, undoubtedly, very largely to blame. Our banks are closely watched and very properly restrained from taking people's money on false pretenses; but is it much better for industrial and other corporations to take it by means of legalized fictitious evidences of value? Banks and insurance companies are by no means the only institutions that need watching. One of the reforms that would seem to be worth consideration is legislation prohibitory of the creation by companies existing by authority of law of stocks and securities not representing cash actually paid into their treasuries, or

proprietary interests whose values are to be determined by disinterested parties. Texas has incorporated substantially such a provision in her constitution. Her example should be followed by all other commonwealths.

But the security behind or beneath the debenture or other paper obligatory is not the only thing to be looked into by the investor. Even the form of the document may be important. A case in point, inasmuch as it shows how the preparation of an undertaking for the payment of money may change its apparent value, would seem in this connection to be appropriately quoted. Some years ago certain townships in the State of Missouri were desirous of aiding the construction of railroads with their credit. The state legislature, to that end, passed an act authorizing the issue and sale of bonds obligatory upon them; but it was stipulated—a very singular provision—that, instead of being put out by the townships, the bonds should be executed by the officials of the counties in which they were located. Accordingly debentures aggregating several million dollars were thus prepared and disposed of. The bonds bore the seals of the counties and the signatures of their officials. On the back and at the top of each signature, in large letters, were the words "county bond." The instrument began with the recital, in the usual form, that it was issued by the county, but further on, and in the smallest type employed, came the statement that it was executed for and in behalf of a certain township, which alone was to be responsible for its payment. These bonds were extensively advertised as "county bonds," and probably in most instances, certainly in many, were sold as such, and it was not until purchasers parted with their money, that they discovered that, instead of getting the bonds of well-known and wealthy counties, they had secured only the obligations of townships they had never heard of before. It was then manifest enough that they had been made the victims of a piece of very sharp and very

shabby practice. In many cases the buyers of bonds and other securities learn, when it is too late, that their purchases, owing to some obscure and apparently innocent passage that had been overlooked or disregarded, are very different from what they thought they were getting. How often have careless investors who supposed they were purchasing undertakings that would be good for long terms of years, and who probably paid premiums to obtain them, ascertained at the end of comparatively short intervals that they were forced to accept in payment the amounts nominated in the bonds in consequence of unnoticed clauses giving their makers power to redeem their option! The lesson of such cases is obvious enough. It is that no one should buy a bond or stock without first having carefully read the certificate. This may seem like an unnecessary warning; but in truth it is a most material one. Thousands and thousands of dollars have been lost by the neglect of this simple precaution. "I didn't read the bond" is the explanation that has again and again been offered when time has disclosed a different investment from the one intended to be paid for. The fact is that comparatively few unprofessional bond and stock purchasers ever carefully examine the instruments they acquire. They look at the headings, those parts that are in big letters, and take the rest for granted. It is a most unwise practice. Unless you are previously familiar with the document in all its parts, don't fail to read it before you buy. Read it all, the little type as well as the big type, the indorsements, the coupons, and all. Don't take somebody's else word for it. Examine the seal, the signatures, and even the embellishments. Something may be disclosed that will change your mind and save your money.

But if there are tricks in the making of securities, even more are to be apprehended in the selling of them, and should be guarded against with corresponding diligence. It is a notable fact that no poor securities are ever offered.

They are always good so long as they are on the market. It is only after they have been purchased that they prove to be worthless. Interest has never been known to fail on bonds that are seeking investors, although default has sometimes followed very closely on the sale of the last obligations. Indeed, it is no secret that interest is sometimes paid out of the proceeds of the bonds, the purchasers in this way getting a portion of their own money back while the process of marketing them is going forward, although such a thing has seldom been known to happen after the entire issue has been disposed of. The advertisements of some bondsellers are often marvellous productions. No such securities as they have to offer have ever been on the market before. They are absolutely safe; they pay extra rates of interest, etc., etc. The wonder is that with so much capital seeking investment, it is found necessary to advertise such perfections at all! In such cases it is hardly necessary to say that the only safe rule for investors is to find other uses for their money, however strong the temptation may be.

A common expedient of bond-makers and bond-merchants is to fortify their issues with the favorable opinions of eminent lawyers. This is particularly the case when the obligations of municipalities or of companies that are dependent upon contracts with municipalities are offered, some municipalities having in the past shown an unpleasant disposition to go back on their undertakings. No exceptions can be taken to the practice referred to, as counsel learned in the law should in such cases always be consulted; but the writer has to say that he has never yet known a security so poor that a lawyer's opinion could not be had to back it. Such testimonials should be taken for what they are worth, and no more.

When so many seductive baits are offered, so many nets and traps, contrived and constructed by clever brains and cunning fingers, are spread for the capture of those having

money, is it surprising that the careless and credulous are victimized, and even that the sagacious and prudent should sometimes be taken in? Nevertheless, for the losses they have sustained, investors, as a rule, have themselves chiefly to blame. The mistakes made, in nine cases out of ten, have been the purchase of "cheap" securities. The hope of realizing a little more than ordinary interest, by buying paper at a discount, has proved to be the rock on which unnumbered capitalists have split. In addition to their money's worth, they have endeavored to get something for nothing, with the result of most generally getting nothing for something. It is remarkable how blind are people, ordinarily sagacious enough to make money, to the fact that property cannot pay a revenue beyond its producing capacity. For instance, how can a trolley company, whose line is wholly or mainly built from the proceeds of mortgage bonds, sell them at a heavy discount, besides allowing large commissions for the selling, and then pay both this interest and dividends on a large issue of watered stock? Or how can a poor agriculturist, occupying a half-improved farm out on the frontier, with a family to support and grain selling verily above the cost of production, pay ten or twelve per cent upon the capital with which he does business?

By what rule or rules is the investor to govern himself? No formula can guarantee him absolute safety. One thing, however, he can properly count upon, viz., that he must expect to pay a fair price for a good security—one that will return him no more than a moderate interest on his money. If he wants to speculate and is willing to take risks, that is another thing. He can then look for bargains. The capitalist or investor who sends his money into a new section, or puts it into a new mechanical process, or a new constructive enterprise, may or may not make a hit, but for the ordinary and conservative operator, the conditions of the commercial and financial world give warning that only reasonable profits are to be looked for. The first and main

thing to be studied is safety. And yet there is such a thing as going too far in the matter of prudence. The investor may pay too dearly for safety. There are securities which, compared with others that are to be had, sell at prices much above their real worth. The reason is that everybody knows them to be good, and investors who don't want to take the trouble to investigate, or are afraid to trust both their own judgment and the counsels of their friends, are willing to pay extra prices for them. But there are plenty of others that may be had at lower figures, which are just as good. There is no reason in the world why the investor should not safely invest at a rate that will generally yield him 4 per cent to 5 per cent interest, and have his investment as secure as any property can be under human supervision. As heretofore stated, with the creation of new enterprises and properties, and the development of old ones, new securities are constantly appearing in this country and a fair share of them ought to be good. Indeed, our securities ought to be the best in the world. The sure and rapid growth of our resources supplies a reliable support as long as fair intelligence and common honesty attend their production. The only thing is to choose with discretion, so many doubtful and even fraudulent issues appearing at the same time; but no more judgment is really demanded than in purchasing lands or cattle.

Two common and often fatal mistakes should be avoided. One is in relying solely upon the advice of another. No one competent to form an opinion for himself should put his pecuniary interests unreservedly in the keeping of another. Such absolute confidence invites betrayal. By far the greater number of losses to investors have been in securities purchased exclusively on the recommendation of interested outside parties. While it is well to get the opinion of a reputable broker, the purchaser should investigate for himself. The other mistake is to give preference uniformly to listed securities. As pointed out at the

beginning of this article, many persons seem to think that stocks and bonds must have a value if they are quoted at some stock exchange, forgetting how many fancies have been ballooned until they have burst at such places. On the contrary, such a position is likely to expose them to manipulation for purely speculative purposes. Stock-exchange quotations are often unsafe guides to buyers. They represent not merely the value of the property but also the pitch of speculation at the time. When securities are converted into foot-balls for gamblers to play with, they are pretty certain to be too high or too low. The main advantage they can have is a readier marketability in case of an urgent need to sell; but it is at the times when such need is likely to exist that they are pretty certain to be at the lower point. No speculative help can long take the place of real value. Securities, in the long run, must stand upon their merits, and purchasers have merely to follow business principles as taught by the canons of common sense.

In seeking investments, and especially long time investments, there are several things to be taken into account. There is not only the question of the kind of security to purchase, but the question of the time of purchase. There are opportunities to be looked for as well as pitfalls to be shunned. It is during periods and seasons of depression, when securities are forced upon the market, often to be sacrificed—and such opportunities are certain to come if waited for long enough—that the shrewd investor finds his richest harvest. That, however, cannot be said of the ordinary investor. He usually buys when securities are up and confidence is unimpaired, and becoming frightened as the market values go down, sells when they are at the bottom, and holds his money to reinvest in something else no better, and probably not as good, when the tide has turned. As a rule, the best time to invest is when others are unloading. In money matters it is never safe to follow "the crowd." Nor is it safe, (which is little more than the ex-

pression of the same idea in another form) to purchase a security when it is on the "boom." A peculiarity of our money market, conservative as it is popularly supposed to be, is that it is constantly changing its favorites. Its offerings come in waves. Its dealings at one time may be chiefly in railways, at another in industrial obligations, and at another the excitement may run to mining shares or mortgages on ranches and real estate. For the time all professional brokers and bond and share sellers urge their customers to adopt the popular issue, of which, as the result of the increased demand, there is almost certain to be excessive, if not fraudulent production. To yield to the pressure of such a time is always risky. Old and tried securities, like old friends, are likely to be the truest and the best.

One thing the investor would do well never to forget, is that there are always plenty of good securities in the market. No one with money need ever fear that others will get all the solid investments, and, in the apprehension that there will not be enough of that sort to go around, put up with an inferior article. Don't let him choose what is not altogether satisfactory, under the impression that nothing else as good or better will offer. If he does so, sooner or later he will regret it. Something good always comes to him who waits with money in his hand.

Another thing of a precautionary nature it is well enough for the investor to do, and that is to scatter his purchases. The old adage about not putting all the eggs in one basket applies with peculiar force to investments. The tendency with those having moderate sums to invest, and who need to be the most circumspect, is to make up their minds in favor of a single line of securities and put everything there. Of course, a failure in that quarter is particularly disastrous. The writer knew a man, some years ago, who decided in favor of municipal obligations, saying that he had satisfied himself that, on the whole, there was noth-

ing else so reliable. Accordingly he put his entire available means into them. But practicing abundant precaution, as he supposed, he divided his money equally among municipal issues of Illinois, Missouri and Kansas, they having the most paper at that time on the market. He thought he was entirely safe as to principal. But soon after a wave of repudiation sentiment swept over that part of the country, and every one of his bonds was left in default. It is well enough to scatter in kind as well as in locality.

Against the theory of scattering investments, men sometimes quote the advice of Andrew Carnegie to "put all your eggs in one basket, and watch the basket." This principle, however, while sound enough for the expert or specialist who is in a situation at all times to see and watch the basket, is not applicable to the average ordinary investor. The average investor simply cannot "watch the basket" in the way implied by Mr. Carnegie, and therefore it is a safe principle for him, under all ordinary circumstances, to limit his chances of loss to the greatest possible extent through a wide and judicious distribution of his capital.

THE OBLIGATION OF THE INVESTMENT BANKER TO HIS CLIENTS.

BY ALLEN G. HOYT.

[Of N. W. Halsey & Co.]

Investment banking is a serious, responsible business. An investment banker is in one sense like a merchant. He buys securities at wholesale and sells them at retail. In another sense he is a counsellor. He must offer his clients sound advice regarding their investments. He must recommend to each customer securities adapted to the particular needs of that customer.

The banker as a merchant is under the heaviest of obligations to handle goods of honest value. He may not take advantage of the principle of "Caveat emptor." Unlike most wares sold by merchants, the goods a bond dealer handles must never wear out. They must remain sound and true for ten, twenty, or fifty years, and at the end of their life they must be redeemed at their full face value.

The investment banker, therefore, who has a proper appreciation of the nature of his calling will make the matter of safety of the securities he handles his chief concern. He will bring to his aid all his skill, judgment and experience, to assure himself of the soundness of the bonds he offers.

The responsibilities of the bond dealer are particularly heavy for another reason. His client frequently when buying securities relies absolutely and completely upon his recommendations. The investor has neither the time, the money, the knowledge, nor the experience necessary to enable him to determine the value of the bonds he is buying. He is completely in the banker's hands. The dealer of the right sort will not regard lightly the obligations imposed upon him by the relation of trust which he bears to his client.

The banker ought to be exceedingly careful of the character of the bonds he sells. People buy of him for investment; they are not speculating and they cannot afford to lose. Many of his clients are absolutely dependent upon the income from the securities they buy for the wherewithal with which to live. If any of the securities turn out to be worthless some of the holders may actually suffer for the necessities of life. The bond buyer does not expect to take any chances; he is a loaner of money and all he is promised for parting with his money is the payment of the loan at maturity with a certain specified rate of interest for the use of the money by the borrower. The bond buyer who buys the securities of a corporation, for instance, will be entitled to receive only the interest on his money and the payment of the principal at maturity. No matter how successful the corporation may be the bond buyer gets no part of the surplus earnings of the corporation, however large they may become. The earnings, above the payment of the interest on the indebtedness, belong to the stockholders, who are, in fact, the owners of the property. If any risks are to be incurred, the stockholders should take them. The bondholder is merely a creditor; he is concerned only in the security for his loan and that security ought to be ample.

So the investment banker, in investigating this matter of the safety of the bonds he offers to his clients, spends a great amount of his time and money. He brings all his skill, judgment and experience to bear on this all-important question, and if the banker is lacking in skill, if his judgment is faulty, or if his experience in his profession has been limited, disaster is almost certainly in store for him and his clients through the purchase of unsound securities.

In dealing in public utility and industrial bonds, the responsibility of the banker to his clients is particularly heavy. Public utility or public service corporations are companies which supply such necessities of modern urban existence as gas for lighting and heating, electricity for

lighting and power and transportation by means of surface, elevated or subway lines. Public utility bonds, as a class, rank higher than industrial bonds, because the earnings of public utility corporations are not subject to the same fluctuations from year to year, and because in years of business depression, the earnings do not shrink nearly so severely as do the earnings of most industrial corporations.

When a banker handles an issue of public utility bonds, he, either alone or with associates, handles the entire issue. He becomes identified with the property and on him is the entire responsibility for the future history of the bonds. Therefore, the examination which the conscientious banker makes before he purchases an issue of public service corporation bonds is particularly thorough and exhaustive. He not only employs his own experts but calls to his aid outside engineers, auditors and corporation lawyers of the highest rank. He investigates the character of the community served, the condition and value of the property by a mortgage on which the bonds are secured, the management, the adequacy of the earnings, the franchises, the question of over-capitalization, the chance of future success, the legality of the bond issue, and so forth. He studies the corporation from every point of view possible.

It is my opinion that if the public service corporation bond meets the requirements of the conservative, conscientious and successful banker, there is no other security so well adapted to the needs of the average investor.

Such bonds are safe: they yield a higher rate of interest than do other classes of bonds of equal merit and their market history, for the past ten years at least, compares very favorably with that of railroad and municipal bonds.

Public service corporations have, as a class, grown and prospered greatly during the past decade. This has been to a considerable extent due to the rapid growth of the municipalities they have served. The recent census has demonstrated that nearly all American cities of substantial size

have increased materially in population since the enumeration of 1900. The statistics of our better public service corporations show that their business has grown even more rapidly. With a more general appreciation of the merits of the right kind of corporation securities, there has developed a broader demand for them. While during the past decade there has been a decline in the prices of most high grade railroad and municipal bonds, due probably to the fact that capital is worth more today than it was ten years ago, corporation bonds, since they bear the higher rate of interest now demanded by capital, sell close to the prices they brought ten or fifteen years ago. The broader demand for this class of bonds taken in connection with the growth in strength and prestige of the issuing companies has prevented them from showing the same decline in market value that has overtaken railroad and municipal bonds.

As I have said before, the responsibilities of the banker in dealing in corporation bonds are particularly heavy. As the banker usually buys an entire issue, the bonds are held exclusively by his own clients, and he must not only be convinced that the bonds are safe but he must make a market for them as well, in order that his clients may borrow on them or convert them into cash, if they find it necessary to do so. The banker must not only assure himself that the bonds are sound when he buys them but that they will continue safe under whatever conditions may arise. He usually keeps in touch with the property as long as the bonds are outstanding and often by advice or moral pressure or some other influence he is able to prevent ill-considered action on the part of the owners of the property which might prejudice the standing of the securities.

That our better bankers do not regard lightly their responsibilities to their clients I can illustrate by an example which has come to my attention.

In one case the facts were about as follows: (I have changed them sufficiently to prevent identification of the

particular situation). A group of bankers handled the bonds of a hydro-electric company. The company had been in operation but a comparatively short time, when a terrific flood carried away the dam and did other damage which virtually destroyed the power plant. The bankers came forward and reconstructed the dam and the power house at a cost of about three quarters of a million dollars. For their advances to the company they took junior securities, which have a very questionable value. It will be a great many years before the bankers will get back the money they advanced, if—in fact—they ever do. They took this action with a view only of protecting the interests of their clients who had purchased the first mortgage bonds of the company. Had they not provided the funds for the reconstruction of the dam and plant, their bondholders would have suffered heavy losses. The bankers, although they were not legally liable, preferred to make a heavy sacrifice rather than have their bondholders suffer.

While this is an exceptional case, the dealer in corporation bonds ought to enjoy a high standing, the best of credit and to have ample resources at his command. The securities handled by a banker with such a standing are exceedingly unlikely to cause their owners any trouble, but if by any chance the corporation issuing the bonds is overtaken by misfortune, the banker will be in a position to aid the corporation financially, if the situation warrants, or to demand that his clients as bondholders be treated fairly by the receiver and that they are not defrauded or bilked by any equitable reorganization or other scheme.

Such an instance as I have mentioned shows how strong a sense of honor governs the actions of some bankers and how highly they regard their obligations to their clients.

THE STUDY OF FUNDAMENTALS AND THEIR BEARING ON SECURITY PRICES.

BY THOMAS GIBSON.

[Author of "The Pitfalls of Speculation," "The Cycles of Speculation," "The Increasing Gold Supply," etc.]

The examination of fundamentals as to their bearing on security values and prices and as a means of intelligently forecasting price movements is a most important study. Such examinations I regret to state are frequently characterized as useless. This is because the study is not carefully and conscientiously conducted with a clear understanding of what must be done and what must be expected.

One of the most common, and at the same time, most fatal of the errors we are apt to fall into, in conducting our investigations, is the attempt to reconcile present conditions with the action of the stock market. Security prices always move ahead of basic developments, never after or in connection with such developments. In 1905 and 1906, for example, we had a great advance in the stock market. This advance represented the anteriority of security prices, the anticipation marketwise of the great business boom of 1907. But when that business boom arrived, the stock market had fully discounted it and had begun the work of discounting the depression of 1910 and 1911. This precession of prices when not clearly understood causes many people to say that the security market is irrational; that it does not act as it should act; that prices decline in good times and advance in bad times, etc.

Nevertheless, security prices are, in the last analysis, *always* based on values, and values are in turn dependent largely upon prosperity and basic conditions. Good management, economical administration, territorial growth and other things must be considered in arriving at true values

but widespread prosperity is the most important single factor. Prices frequently become divorced temporarily from values through manipulation, fighting for control or technical conditions, but the hiatus must sooner or later disappear and prices and values will be reconciled. It is when prices are lower or higher than values, present or prospective, that we have our greatest speculative opportunities. I wish to explain, parenthetically, that in using the word speculation or its derivatives, I employ it in its broadest sense and not according to its popular usage. Speculation is not confined to gambling on margins. Any man who buys because he believes a thing to be cheap and in the belief that it will advance in price is speculating, whether he pays cash or buys on margin. That definition applies to coal or bricks or real estate or to anything else. It is not confined to securities alone.

As security prices always anticipate fundamental conditions, it is necessary in our study of basic causes that we must deal with the future and with what is now unknown. This may appear paradoxical, but it is not so. What we undertake is, by a study of precedent and an examination of present development, to arrive at reasonable conclusions as to the future and to act accordingly.

The examination of precedent is most important. Such examinations carefully conducted will show us with a reasonable degree of accuracy what has followed certain conditions in the past and what may be expected to follow similar conditions in the future. We will also learn in about what ratio our population, cultivated acreage, earnings, etc., should *naturally* increase and we may so decide whether advancement is deficient, normal or abnormal.

Students of fundamentals frequently fall into a very serious error by allowing their examination of precedent to extend over too brief a period. Comparisons of one month with a preceding month are ridiculous, as such comparisons do not allow for seasonable changes. There are certain lean

and fat months or seasons in all lines of business. And the comparisons of one year with a preceding year are also frequently insufficient. If, for example, our railroad earnings should bound up abnormally for two years as they did in 1909 and 1910, a moderate reaction in the following year would not be unusual or discouraging. In the year 1909, the gross earnings of all railroads in the United States advanced $278,038,372 as compared with 1908, and in 1910 they increased $229,840,433 as compared with 1909. But even after this unprecedented gain, we hear numerous complaints because of some small decreases in certain months of 1911.

Let me point out another instance which even more distinctly illustrates the folly of such comparisons. A few days ago an article appeared in a leading financial organ, bemoaning the increase in our idle cars. It was shown that idle cars in May, 1911, amounted to about 187,000 cars as compared with only 122,000 in May, 1910. Nothing was said about May being the month in which we almost invariably find the largest number of idle cars, but what makes the argument most inadequate and misleading is the comparison with a single year. If the writer of that screed had taken the pains to go back a little further he would have found that the number of idle cars in May, 1911, was the smallest in recent years *with the single exception of 1910.* In May, 1907, we had 300,000 idle cars and in November of that year a *shortage* of 90,000 cars; in May, 1908, we had over 400,000 idle cars and in October only 100,000. In May, 1909, we had 285,000 idle cars and in October a shortage of 5,400 cars. Idle cars at certain seasons are inevitable. They are necessary. We must have them in the crop-moving period or business would be thrown into chaos. In the dull months we cannot retire our surplus cars on the same plan as is proposed for surplus banknotes. As our population grows and as we build idle cars to meet such growth, we should, everything being equal, have more idle cars in the dull periods from year to year.

I cannot pretend in the space at my disposal to give a comprehensive formula for the study of fundamentals, but I will offer a few suggestions on three of the most important factors to be considered, that is, crops, money and foreign trade.

Crops.

The products of the soil is the most important of all our fundamental factors, for upon our ability to produce commodities for our own uses, and to sell for export, money conditions, foreign trade balances and other factors are largely dependent. In examining this phase of the question we can easily arrive at the probable production of minerals or other products not affected seriously by climatic changes, but the agricultural products require more careful attention. A large acreage does not insure a large yield. We had a striking example of this in the spring wheat crop of 1910. Acreage was the largest on record but in the month of July the condition of the growing crops suffered so severely from drought, that a very small crop was harvested. Such a calamity could not be foreseen, but fortunately such acute changes are rare and may be classed as accidents.

In most cases we can get a fair idea of the probable crops some time before they are harvested. Looking at this year's prospects for spring wheat we may begin our study in the following manner: The fall of 1910 was a dry period in the Northwest. Therefore we may reasonably assume that the soil did not store up a sufficient amount of surplus moisture and that heavy rainfall would be necessary to make a good crop in 1911. The spring of 1911 was an ideal one for planting, however, and too much moisture in the ground in the planting period is not necessary or desirable. Under such conditions the plant takes on a rapid growth, greatly accelerated by periods of sunshine. The roots of the plant do not find it necessary to go down for moisture but spread out over the ground and

the stand is poor. If a period of dryness follows you can pull up handfuls of the stalks with no physical effort. The best crops are made when the roots are deep and when sufficient rainfall follows to nourish the plant. Therefore our spring wheat crop of 1911 was well started but was dependent upon a heavy rainfall for a time. By keeping a close watch of the developments, we can arrive at a fair estimate of the outcome long before the crop is harvested.

In examining the crop reports of the government or private documents, we must not be discouraged because certain months show a decline in conditions or a certain amount of abandoned acreage. The start is almost invariably better than the finish. The Department of Agriculture will this year adopt the method of allowing for normal deterioration in expressing quantitative estimates of production, and this will simplify the mattter somewhat. We should also take into consideration the fact that a too favorable showing in the first reports is not a good thing. This is particularly true of cotton. In the last twenty years we have only twice started the cotton season wih a June condition as high as 90. In 1896 the June condition was 97.2 and in 1902 it was 95.1. On both occasions the crop was a failure. The condition at harvest in 1896 was 60.7, and in 1902, 58.3. On the other hand the lowest June conditions in twenty years were in 1903, 1905 and 1907, and in each instance the condition at harvest was higher than in either 1896 or 1902. Our greatest crops (1904, 1906 and 1908) were made on a June condition of 83.0, 84.6 and 79.7, respectively. From 80 to 85 may be considered the safest and most normal June condition.

In estimating the probable effect upon security prices of large or small crops, we should give particular attention to the supply and demand of the world. A large crop at home and a short crop in countries which import our foodstuffs or cotton makes for greater demand and consequently higher prices for our exportable surplus. This in turn

means larger trade balances and better money conditions, and better money conditions work in favor of higher security prices.

The use of fertilizers, the ravages of insects and other factors will require attention, but the task is not so formidable as it may appear. The Government furnishes for the asking a great deal of competent literature on the subject, and the reports of railroad corporations and individuals are freely published in trade organs and the daily press. What must be studiously avoided is the tendency to take too much for granted. Every year we have a batch of good and bad reports from interested people who misrepresent prospects or conditions in order to further personal aims, but a comprehensive examination of the subject will easily enable us to separate the true from the false and the reasonable from the unreasonable.

Money.

Money conditions represent one of the greatest fundamental factors. In applying money conditions and prospects to the probable course of security movements, we find many phenomena which are easily read and which are almost certain in their effects. I will not attempt to pass on the merits or demerits of our miserable currency system, or to discuss the numerous cures suggested, but will touch briefly on the broader influences which are easily examined.

Interest rates show seasonable variations because of the plethora of money in certain seasons and the demand for money in other seasons. The trend of interest rates in December is usually upward throughout that month and during the first week or ten days of January. They then tend rapidly downward until near the first of March. This is due to the fact that money becomes tighter in December in preparation for our great cash January disbursements in interest and dividends on bonds, notes and stocks. This money, being distributed, finds its way back into the banks

or the market, and lower interest rates follow. Money usually advances more rapidly from the middle of June until the last of September than at any other period of the year. This is also due, but only in part, to the preparation for July disbursements for interest and dividends. More important, however, is the demand throughout the months of July, August and September for crop-moving purposes and the payment of farm obligations. In December we frequently find an advancing security market in connection with higher money rates. This represents the anteriority of stock prices. Speculators know that money will soon flow back not only into the banks, but into securities, and they will buy in anticipation of such a rise. Also we find frequently an advancing trend in the three months of highest money rates, for our crop prospects are then pretty well established and if they are good, we can afford to pay high rates for funds to be employed in speculative ventures, because of the promise of higher security prices in the future.

We cannot safely argue, therefore, that an advancing market is improbable in a period of high or advancing rates for money. Nor can we consider low or declining rates a sufficient reason for higher security prices. A plethora of money may spell stagnation in general business and lack of confidence in future progress. There are certain indications, however, which will greatly aid us in arriving at reasonably correct conclusions. I will mention two of them.

By constant examination of the percentage of loans to deposits and of specie to loans, we may easily determine when we are on safe or dangerous ground. We must look at both phases of this factor. If the percentage of loans to deposits is unduly high, this condition may be mitigated by a correspondingly high percentage of specie to loans or, on the other hand, if the percentage of loans to deposits does not appear unduly high but the percentage of specie to loans is very low, we may be in a dangerous position. It is when the two spread apart—when loans go up and specie falls—

that the worst condition is indicated. In 1907, I called attention to this factor and the danger from the conditions which then existed, not hesitating to predict a great decline in security prices as the result. In an article published in February, 1907, I drew the following conclusions:

"In order to illustrate the importance of the money situation and the fidelity with which market movements have followed monetary conditions, the following records are set forth, covering important movements of recent years.

"In 1890, twenty stocks listed on the New York Stock Exchange were selling at an average price of about $87 per share. The percentage of loans to deposits was about 95 per cent and the percentage of specie to loans about 20 per cent. In November of that year, loans advanced to 102 per cent as compared with deposits, and specie declined to about 18 per cent of loans. The stocks mentioned declined to an average price of $64 per share and later in 1901 to about $61 per share. From 1891 to 1893, there was some alternate improvements and retrogression in money conditions, all of which was accurately reflected in stock prices.

"In 1893, the proportion of loans to deposits rose to about 109 per cent and the proportion of specie to loans declined to 13 per cent. The average price of the twenty stocks reached about $47 per share. (The panic of 1893.)

"In 1894, the proportion of loans to deposits fell to 80 per cent and specie to loans rose to 30 per cent. This was due to the liquidation of 1893. Stock prices showed some betterment, rising to about $57 per share. The severe drubbing of 1893 had made public investors nervous and had in many cases incapacitated them for stock market operations. That was to come later.

"In 1896, the proportion of loans to deposits rose to 102 per cent, and specie to loans fell to 10 per cent. Stocks reached their lowest level in July of this year ($42 per share for the 20 stocks mentioned).

"From 1896 to 1898, a gradual improvement was ap-

parent. Through all this period stock prices faithfully reflected money conditions. In July, 1897, the proportion of specie to loans rose to 30 per cent and loans to deposits fell to 83 per cent. Stocks began advancing, and in March, 1899, the average price of the 20 stocks considered was about $85 per share.

"In June, 1900, the average price of the twenty stocks considered was about $75 per share. The proportion of specie to loans was about 22 per cent and the proportion of loans to deposits about 90 per cent. From January, 1901, until September, 1902, money conditions did not improve, but stocks continued to advance. There were large crops, and a general wave of expansion and prosperity swept the country. In September, 1902, the proportion of loans to deposits was 99 per cent and the proportion of specie to loans about 17 per cent. Meanwhile stocks were high—$128 per share for our twenty stocks. Conditions, though temporarily ignored, asserted themselves in 1903, and in September of that year the average price of the twenty stocks was about $88 per share; the percentage of loans to deposits was 101 per cent and specie to loans 19 per cent. The money situation had not changed materially, but the stock market was making a deferred payment.

"In August, 1904, the proportion of loans to deposits had fallen to 90 per cent and specie to loans had risen to 25 per cent. The stock market was steadily advancing, and in January, 1906, stocks reached their pinnacle—$138 per share for the twenty securities considered.

"And this brings us down to January, 1907. The proportion of loans to deposits is about 102 per cent. The proportion of specie to loans is about 17 per cent.

"The average price of our twenty stocks is about $130 per share.

"What is the use of talking about a bull market, a 'Spring rise' or manipulation in the face of such conditions as this?"

The other point referred to is the income yield on seasoned securities at different stages of the market. Every advance in prices cuts down the yield and every decline in prices increases the yield so long as the rate of dividend remains unchanged. Stock prices went so high in the latter part of 1906 that the average return on a number of standard dividend-paying securities was reduced to about 3¼ per cent. In the panic of 1907, prices went so low that these same stocks, with no change in dividend rates, showed a return of 7 per cent on money invested. It was not difficult to determine that stocks were too high in the former period and too low in the latter period. In the first case, money was worth more than 3 per cent in all lines of business; in the latter case, it was worth less than 7 per cent. The conclusion was obvious, yet so prone are public speculators and investors to become elated in boom periods and depressed in panic periods, that this glaring evidence of what would happen later was lost sight of or disregarded. I will offer the opinion that in normal times, seasoned securities should return about 5 per cent or midway between the two extremes cited above.*

Our Foreign Trade.

Our imports and exports of merchandise are an important factor bearing on prosperity and consequently on security prices. In periods of prosperity and inflation we become wasteful, careless and extravagant. Our imports rise and our exports fall and the net balance shrinks. This must be corrected before we are again in a normal trade position.

In examining the progress of our trade balances we will find that we are steadily undergoing a change in the character of our exports. Our shipments of foodstuffs decrease or at least do not increase in ratio to our growth of population and production. Cotton is now the only important

* The rate of return on these selected securities now averages 5.40 per cent.

agricultural product which shows a steady increase in our exports and this is partly due to a steady advance in the average price secured for the staple. Twenty years ago cotton made up less than 20 per cent (in dollars) of our merchandise exports; ten years ago it made up about 24 per cent and in 1910 about 29 per cent. Cotton is our big "money crop."

But in this falling off of our exportable surplus of most agricultural products there is nothing to be alarmed about. Our exports of manufactured and partly manufactured goods grow rapidly to fill the gap. That is the history of all new countries. At first they begin to exchange their raw materials for such manufactured goods as are required and gradually, as population and facilities grow, to consume raw materials and to produce manufactured goods for domestic use or for sale. It would not be at all inimical to our progress or prosperity if we gradually come to a point where we actually import foodstuffs or textiles for our own needs.

As has been stated, I realize the impossibility of setting forth, in a limited space, anything definite or comprehensive on so great a subject as the study of fundamentals. All I have hoped to do is to offer suggestions which will start the student in the right path and to point out some of the most common fallacies in regard to the most important basic factors. It may appear that the subject is too broad and complicated to be successfully undertaken except as an exclusive study, but I do not believe this is the case. One examination will lead to another, the confusing problems will be rapidly cleared up, the study will be found most interesting and profitable and in a short time the man who devotes a little time each day to the intelligent examination of these factors will find himself abreast of the times and his general conception of business affairs greatly broadened.

Extracts From an Address by Thomas Gibson on the Standard Oil Decision Before the Finance Forum of New York.

Personally my chief interest in the Standard Oil decision is as to its bearing on security values and prices. During the last few days I have frequently heard the statement from those interested in security price movements, that the importance of the ruling marketwise was overestimated. In my opinion it is underestimated. The question of the final construction of the Sherman law has acted as a depressing and repressing influence on all lines of business activity for a long time. The opinion has been offered at times by men whose utterances command respectful attention that a strict interpretation of the Sherman act would be revolutionary in its effects on business; we have been told that there was a possibility, or even a probability, that general business disruption and practical confiscation would follow the handing down of the Standard Oil and American Tobacco decisions. The rulings of the Court in the Standard Oil case prove that these fears were not justified.

So great has been the apprehension from this cause that important projects have been delayed or abandoned, and even in cases where promoters or capitalists had confidence in the sanity and integrity of our greatest judicial body, the lurking fear has been present that through the necessity of a strict construction of the letter of the law, a serious condition would arise. In the stock market a great many people who had money to invest and who were satisfied with fundamental conditions and future promise have refrained from entering the market. A still greater number who were confident that no measure which aimed at the life of business combinations could endure, have deferred purchases in the belief that the temporary effects of adverse findings would give them an opportunity to buy at lower prices. Still others have considered it no worse than

an error on the side of prudence to await the outcome, even if such delay meant that they must pay somewhat higher prices for their prospective purchases.

The recent depression in general business has been due partly to this waiting attitude and partly to natural and basic causes. The two combined have caused unusual uncertainty, and consequently, unusual caution. The effect has been most keenly felt in the securities markets. That part of the depression which was due to basic causes would not have exercised so great an effect on speculative ventures, for Wall Street always looks ahead of present conditions and discounts the future. Periods of business depression or activity are always reflected in stock prices long before they appear. Thus, 1907 was a banner year in general business and a panic year in the stock market, and 1908 was a year of advancing prices and business depression. We can foresee the probable future of business with some degree of accuracy, but it would be paradoxical to say that we could foresee an uncertainty.

* * * * * * *

In my opinion this uncertainty is now at an end, at least for some time to come. So great has been the disturbing influence of the pending interpretation of the law that the study of basic conditions and prospects has been neglected or confused. We can now look with a clearer vision and a broader perspective at such things as crop prospects, money conditions, and other fundamentals which always go to make for prosperity or depression. If we had been compelled to await the Supreme Court rulings until fall, it would have been a bad thing, for a great many people would have argued somewhat as follows:

"Yes, we find crop prospects excellent; we are satisfied with the material progress and conditions of the country, but we are afraid of the Sherman law. We cannot measure or even surmise its nature or its effect."

* * * * * * *

A layman necessarily looks at the Standard Oil decision in a very different light from what a lawyer does. As it appears to me the meaning is about as follows:

A corporation or combination of capital which by autocratic and high-handed methods crushes out competition and gains practical or absolute control of a certain commodity and thus obtains power to arbitrarily fix prices and stifle competition, is inimical to the interests of the people and is amenable to the punishment provided under this act. But a corporation or combination of capital which combines for the purpose of increasing administrative and operating efficiency and by so doing effects economies or gains facilities which permit it to undersell competitors who employ antiquated methods, is for the benefit of the people and does not come within the law. The mere reading of the word "reasonable" into the law is vigorously objected to by many lawyers, but this criticism must be based on technical grounds alone. No one can object to the word itself in any connection. I am not competent to express an opinion as to whether or not such decisions should be construed literally and upon the evidence of innocence or guilt alone, without reference to the *intention* of the law, but in accepting the findings of the Supreme Court in this or any other case, it appears to me that we should be content with the fact that such rulings represent the consensus of opinion formed after mature deliberation by our highest tribunal. No citizen has a right to impute motives to the Supreme Court; no one, at least no layman, has a right to reflect upon the legal ability of its members. Our Chief Executive is also in accord with the spirit of this decision as is evidenced by a full reading of his message of January, 1910.*

* This statement was questioned by the audience, but was fully supported by quoting extracts from President Taft's message of January, 1910. A single paragraph from that message had been widely quoted by the press, which, standing alone, put the President in the light of holding opinions at variance with the recent findings of the Supreme Court in the Standard Oil case. A full reading of the message will show absolutely that the President was in complete accord with the court findings.—T. G.

MARKET MOVEMENTS OF SECURITIES.

BY GEORGE GARR HENRY.

[Of Salomon & Company, Bankers, New York; Former Vice-President, Guaranty Trust Company, New York.]

There is no question connected with the investment of money more important than the ability to judge whether general market conditions are favorable for the purchase of securities.

After learning how to judge the value of every form of investment, a man may still be unsuccessful in the investment of money unless he acquires also a firm grasp upon the general principles which control the price movements of securities. By this it is not meant that a man needs to have an intimate knowledge of technical market conditions whereby to estimate temporary fluctuations of minor importance, but rather that he should have clearly in mind the causes which operate to produce the larger swings of prices. If an investor acquires such a knowledge, he is enabled to take advantage of large price movements in such a way as materially to increase his income, and, at the same time, avoid carrying upon his books securities which may have cost much more than their current market quotations. If he can recognize the indications which point to the beginning of a pronounced upward swing in securities, and if he can equally recognize the signs which indicate that the movement has culminated, he can liquidate the securities which he bought at the inception of the rise or transfer them to some short-term issues whose near approach to maturity will render them stable in price, allowing the downward swing to proceed without disturbing him. It it not expected, of course, that the average business man will be able to realize completely this ideal of investment,

but it is hoped that the following analysis will give him a clearer conception of the principles involved.

Broadly speaking, the market movements of all negotiable securities are controlled by two influences, sometimes acting in opposition to each other and sometimes in concert. One of these influences is the loaning rate of free capital; the other is the general condition of business. A low rate of interest or the likelihood of low rates has the effect of stimulating security prices, because banks and other money-lending institutions are forced into the investment market when they cannot loan money to advantage. Conversely, a high rate of interest or the prospect of high rates has the effect of depressing prices, because banking institutions sell their securities in order to lend the money so released. The automatic working of this process tends to produce a constant adjustment between the yields upon free and invested capital. When money rates are low, securities tend to advance to the point where the return upon them is no greater than that derived from the loaning of free capital. When rates are high, securities tend to decline to a point where the return is as great. This explains the influence of the first factor.

The other factor is the general condition of business. Good business conditions, or the promise of good conditions, tend to advance security prices, because they indicate larger earnings and a stronger financial condition. Poor business conditions, or an unpromising outlook, have the reverse effect.

The larger movements of security prices are always the resultant of the interaction of these two forces. When they work together the effect is irresistible, as when low interest rates and the prospect of good business conditions occur together, or when high money rates occur in the face of an indicated falling off in business activity. At such times all classes of securities swing together. For the most part, however, money rates and business conditions are op-

posed in their influence, rates being low when business is bad and high when business is good. Usually the worse business conditions become, the easier money grows; while the more active business becomes, the higher money rates rise. The effect of this antagonism between the controlling causes is to produce movements of different proportions and sometimes in different directions in different classes of securities. High-grade bonds may be declining, middle-grade bonds remaining stationary, and poor bonds advancing, all at the same time. This serves to give a very irregular appearance to the security markets, and appears to justify the widely held opinion that security prices are a pure matter of guesswork, and that they are controlled only by manipulation and special influences. A clear conception of the nature of the influences which are always silently at work reconciles these apparent inconsistencies and makes it plain that general price movements are determined by laws as certain in their operation as the laws of nature.

This may be illustrated by a single example. Let us assume that interest rates are low and business conditions bad with prospect of still lower interest rates and still more unpromising business conditions. What will be the effect upon different classes of securities? High-grade bonds, such as choice municipals, whose safety cannot be impaired by any extent of depression in business, will advance because their market price is influenced almost wholly by money rates. If their interest is certain to be paid, no matter what business conditions may become, they cannot be greatly affected by a reduction of earnings, and consequently the influence of low money rates is left to act practically alone. Middle-grade bonds, such as second-class railroad issues, will remain almost stationary, low money rates tending to advance their price and the fear of decreased earnings tending to depress them. The lowest grade of bonds and stocks, whose margin of security even in good times is not very great, will probably suffer in price be-

cause the fear of default in interest and of reduction in dividends will operate much more strongly than the mere stimulus of low interest rates. Of course, securities cannot be clearly separated into these three classes, but shade imperceptibly into one another. The classification is adopted only for purposes of illustration.

Up to this point we have been concerned merely in showing that the market movements of negotiable securities are controlled by the influence of certain factors. A more important question now remains to be considered, viz.: whether the effect of these two influences is to produce general swings in prices which may be depended upon with comparative certainty, and, if so, what indications are afforded to the investor of the commencement or culmination of such a movement. The answer must be that the combined effect of the two influences described is to produce definite and regular swings in prices, and that the indications which define the movements are not difficult to follow.

A general survey of the history of every industrial nation reveals the fact that business conditions undergo alternate periods of prosperity and depression extending in clearly defined cycles of substantially uniform length. By tracing the usual course of interest rates and of business conditions throughout one of these cycles, a general idea can be formed of the way in which the joint influences operate to produce price movements. To what extent the course of interest rates is a cause as well as a result of changing business conditions, we shall not attempt here to estimate, but will be content to note carefully the general course which rates for money pursue throughout the cycles. Immediately after a financial crisis, which usually closes an era of great business prosperity, money rates become abnormally easy. Within a few months from the climax of the crisis, money accumulates in enormous volume in financial centers. This is caused by the great diminution of business activity which renders unnecessary a large part

of the circulating medium that was formerly required to transact the greater volume of business. To the extent to which this accumulation of money merely reflects a redundancy of currency as distinguished from real liquid capital, it can have little effect in encouraging the resumption of business activity. As time passes, however, and economies in operation commence to make themselves manifest, and especially as waste and extravagance are curtailed, the country as a whole commences to accumulate real liquid capital; that is to say, its total production leaves a surplus over the amount of consumption. In the state of business feeling which has been pictured, the undertaking of new business ventures or additions to existing properties would not be approved, so that the surplus wealth created finds its way into bank deposits as liquid capital. The competitive attempt to loan this capital at a time when borrowers are few produces merely nominal interest rates. This continues for some time. It is only gradually as confidence returns and as the spirit of initiative begins to reassert itself that some part of the liquid capital created each year is diverted into fixed forms. Here and there some enterprising group of men will develop a mine, lay a new piece of railway, or make some addition to an existing undertaking. For some length of time, however, the liquid capital of the country not only remains unimpaired, but is continually increasing. After a time a change comes. The annual surplus of production, though larger than before, is only sufficient to provide for the new undertakings which the growing optimism demands. Interest rates rise moderately in response to the added demand for capital. A few years further along, as business activity increases and success appears plainly to wait upon new ventures, the demand for new capital with which to develop increased facilities and new enterprises exceeds the annual supply of wealth created. Prosperity having increased, another factor commences to assert itself. The spirit of economy and thrift which had prevailed

throughout the years of depression gives place to extravagance, the demand for luxuries, and other unproductive forms of expenditure. While the total production is much greater than in the lean years, the margin of production is not proportionately as great, and this amount is insufficient to meet the demands upon it. The supplies of liquid capital stored up during the years of depression are resorted to, and they serve to provide the new capital for a few additional years. Interest rates at once reflect the encroachment upon stored-up capital, and their rise gives the first real warning of the country's true position. The optimistic business men do not heed the warning. After exhausting all the real capital available in the country, they proceed to borrow extensively from foreigners or from government banks—in this country from the national government through bank deposits. Every step which can be taken to induce foreigners to part with their capital is resorted to. If foreigners will not buy long-term bonds, short-term notes are created. If the foreigners refuse these, they are asked to make loans secured by the new bonds and notes. The rates of interest offered are so attractive that considerable sums are usually obtained, and the pressure of business activity continues further. Finally the day of reckoning arrives when some incident, usually unimportant in itself, first suggests to the lenders of money that their debtors whom they know to be overextended may not be able to pay their loans. The attempt to collect their loans produces a financial crisis which brings to an end the period of prosperity.

The foregoing is a description of the more important stages through which business conditions pass from crisis to crisis. Different cycles vary in particular details, but all agree in essential outlines. Sometimes special influences are at work, which operate to shorten or prolong the cycle. The approach of a crisis will be retarded by inflation of the currency, for the excess finds its way into bank vaults

and increases the volume of loanable credit. The effect of such inflation, however, is wholly disastrous, because the addition to the supply of capital is fictitious, not real, and only defers the day of reckoning for a greater catastrophe. On the other hand, the approach of a crisis can be greatly hastened by wars, conflagrations, and other agencies which destroy capital, and by attacks upon capital and the conduct of corporate business, for such attacks tend to render capital timid and produce the same effect as a violent curtailment of the supply. These are only some of the many influences which might become operative, but they serve to show the necessity for careful consideration of all the factors at work if a true conception of the condition and tendencies of business is to be formed.

From the general account given above of the successive phases of a credit cycle, it is possible to summarize the course of interest rates and the course of business conditions. Money rates become suddenly easy after a crisis, remain low or grow easier for a period of several years, and then rise continuously until the next crisis, advancing with great rapidity toward the close of the cycle. Business conditions remain poor or grow worse a few years after a crisis. Liquidation is taking place, prices are going down, and the uncertainty of the outlook causes diminished activity. Thereafter, however, conditions improve and activity increases with fair uniformity until it reaches the high tension of the period immediately preceding the crisis. The course of interest rates and the course of business conditions may both be deflected by the operation of special influences, but the general tendencies are substantially as outlined. The result of the operation of these joint factors may be traced in the market movements of any class of security desired. Let us consider their effect in producing the market swings of the highest grade of investment issues and of the lowest grade, those which are affected only by money rates and those which are affected almost wholly by business conditions.

Emerging from the strain of the crisis at their lowest point, high-grade bonds, such as the best municipal and railroad issues, advance rapidly as interest rates decline, continuing their advancing tendency throughout the period of business depression which follows upon the heels of the crisis. As business conditions improve, their position, while perfectly secure before, is further strengthened and an added stimulus is given to their rise. About the middle of the cycle when the business outlook is very promising, and before interest rates have sustained any material advance, the prices of high-grade bonds are usually at their highest point. From that time forward they commence to decline, in spite of the increasing prosperity of the country, under the influence of rising money rates. They make their lowest prices in the midst of the crisis, when the strain upon capital is greatest and the outlook for business most unpromising.

On the other hand, bonds of the lowest grade (whose margin of security is least), do not commence to recover materially in price, in spite of the influence of low money rates during the hard times which follow the crisis, the influence of reduced earnings and the fear of default of interest holding them in check. As the outlook becomes brighter, they advance rapidly in price so long as they yield more than current money rates. At some point, difficult to determine in advance but usually well along toward the end of the cycle, they reach their high point and thereafter decline under the influence of the growing stringency in money.

Between these two extremes, every class of security is to be found. The better ones will tend to resemble, in their market movements, the course pursued by the choicest bonds; the poorer ones will approximate the lowest class. In every case, however, unless special influences operate to produce variations, the market swing of a given security should be easily conjectured by an investor who gives careful attention to the relative weight which is likely to attach to each determining influence.

STOCKS AND THEIR FEATURES---A DIVISION AND CLASSIFICATION.*

BY JOHN ADAMS, JR. PHILADELPHIA.

In the following article stock certificates will be classified (1) according to their par value, (2) according to the conditions regarding their issue (i. e., whether the stock is full-paid or assessable), and (3) according to the rights and limitations attaching to common and preferred stocks. Following this threefold classification the article will next discuss debenture stocks and those stock certificates which are analogous to preferred. Emphasis will be given only to such stocks as are listed on some stock exchange in the United States, though at times it will be necessary to touch upon shares traded in elsewhere.

In the first place stock certificates may be classified according to their par value. The great majority of important railroad, industrial and financial corporations have issued stock with a par value of $100; at the same time, however, some of the best railroad stocks in the country, such as the Pennsylvania Railroad, Reading, Delaware, Lackawanna & Western, and Lehigh Valley, have a par value of only $50. Among the largest industrial concerns with shares of only $50 par may be mentioned the Westinghouse Electric Company, the United Gas Improvement Company, Lehigh Coal and Navigation, Pittsburg Brewing, and Cambria Steel. It will be noticed that these companies are mainly incorporated in the State of Pennsylvania, and it may be said that the $50 share for railroads and industrials is largely local to the Keystone State. Examples of large companies with a stock of this par value incorporated elsewhere are

*Courtesy of the Annals of the American Academy of Political and Social Science

extremely few. The shares of two or three unimportant railways have a par value of \$25, but that figure is found primarily in the issues of Boston "coppers," such as Anaconda, Calumet and Hecla, Old Dominion, Osceola, Quincy, Tamarack, Wolverine, etc. Generally speaking, these are stocks of proved value, since their average price is many times the figure stamped on the face of their certificates. In the mining field we also find a large number of lower par values, i. e., in multiples of five dollars and even one dollar a share or lower. In most instances, however, these shares represent mining concerns which are traded in on the curb markets or on the exchanges of San Francisco, Salt Lake City or Colorado Springs.

According to the laws of most states any par value whatever may be fixed for the stock. Consequently there are par values all the way from one cent, in certain mining and oil-well properties, to a few banks and trust companies, such as the Humboldt Savings Bank, and the Union Trust Company of San Francisco, and the West Side Bank of Milwaukee, each with shares of a par value as high as \$1,000. The New Jersey corporation laws, under whose fostering influence most large industrials have been incorporated, provide that any par value whatever may be chosen; but it must be emphasized that the vast majority of stock issues of sufficient importance to be listed on a large exchange have a par value of \$100. It is also practically the universal rule for corporations to have the same par for all classes of its stock where there is more than one issue. Only one exception has been found to this rule, the Northern Commercial Company, which has \$1,622,800 of common stock with a par of \$100, and \$1,620,000 preferred stock of a par value of only five dollars. If every share casts one vote, the reason for the difference may be inferred.

Some stocks, strange as it may seem, have no par value whatever. Thus, the Great Northern ore properties constitute a trust created in 1906, consisting of 1,500,000

"trustees' certificates of beneficial interest," one of which was given to every share of the Great Northern Railway Company when the mineral lands of that corporation were segregated. The Adams Express Company, a voluntary association, dating from 1854, likewise has 120,000 shares of no stipulated par value, paying dividends of eight dollars per share annually. Similarly, the East Boston Company, a Massachusetts corporation going back to 1833, has 150,000 shares of no par value; and among other companies which have adopted this plan several might be mentioned which to all intents and purposes have given their stock a par value of $100, though a "share" of no par value whatever is employed; i. e., the Boston and Worcester Electric Companies and the Boston Suburban Electric, each with preferred stock entitled to four dollars a year cumulative dividends and $100 in case of dissolution.

This Massachusetts idea, if we may so term it, was also applied in the reorganization plans of the Chicago Railways Company. The capital stock of this company is $100,000, which is used as a basis for 265,000 "participation certificates" of four series: The first of 30,800 "parts," the second of 124,300, the third of 60,000, and the fourth of 50,000. The first three are entitled, in order, to eight dollars cumulative dividends, and to $100 on dissolution. The fourth series gets the surplus dividends and capital. The stocks of these companies thus really have a par value of $100 under a different name—using dollars for dividends instead of percentages, and allowing the preferred $100 on dissolution. The reason for this policy may be found in the fact that shareholders cannot be held liable up to the "par value" for corporation debts, as is the case in some states; and again when the capital consists of "parts" of no par value there may exist a good superficial answer to the charge of "stock watering."

A further classification of stock certificates can be made with reference to their issue; i. e., into issued and outstand-

ing, unissued, and treasury stock. Unissued stock is that which has been authorized but not yet disposed of. It merely represents the right to admit new stockholders and has no value in itself. It has no active stock rights and is not an asset of the corporation. It usually is reserved for various corporate purposes, such as the conversion of bonds or the purchase of new lines or plants. Treasury stock, on the other hand, is best described by Wood in words which have been frequently quoted: It is stock "issued and outstanding which has come into the possession of the corporation which issued it by purchase, donation, or in liquidation of a debt. If it has been issued full-paid it remains so, even if sold again below par, and it is considered an asset of the corporation for bookkeeping purposes. But such stock, so long as it is held by the corporation or its representatives as treasury stock, participates neither in dividends nor in the meetings of the corporation as treasury stock; though it still represents a paid-for interest in the property of the corporation." Treasury stock is issued, but is evidently not outstanding. Examples most frequently occur in mining companies, though there the term is usually misapplied, being used to describe unissued stock in the company's treasury. Among industrials holding a considerable amount of treasury stock may be mentioned the United States Cast Iron Pipe and Foundry Company, the Pacific Coast Company, the American Beet Sugar Company, and the Pittsburg Brewing Company.

Stocks can also be classified according to whether they are full-paid or assessable. Full-paid stock is simply that which has been fully paid for as required by law in money, property or labor. The certificates of such stocks are issued stamped "full-paid and non-assessable," and, in the absence of any special statute on the subject, carry with them no legal liability. Assessable stock, on the other hand, is that which has not been fully paid for by its subscriber. Just as Boston is the home of many mining shares with a par

value of $25, so it is also the market for many assessable shares. Calumet and Hecla stock has paid in only $12 on a par value of $25; Franklin, $10.20; Tamarack, $13; Allouez, $22.25; Wolverine, $13; etc. Similarly, in the Metropolitan Securities Company, one of the constituent corporations of the Interborough-Metropolitan Company, only $75 has been paid in on a par of $100; the Philadelphia Electric Company, only $15 on a par value of $25; the Union Traction Company of Philadelphia, only $17.50, though it is now receiving a guaranteed dividend of 6 per cent on its $50 par value. It should be emphasized, however, that outside of mining and public utility corporations, assessable shares are comparatively few. Very few instances of such stock are listed on the New York Stock Exchange. The legal status of assessable stock is such that creditors of the corporation can hold the owners of the shares liable for the difference between the amount actually paid in and the par value of the stock.

Turning next to a discussion of the various features of common and preferred stock, we find that the classification, to be complete, must be very elaborate. An outline is inserted on page 263 to enable the reader to follow more readily the following classification.

"Common stock," meaning the junior issue, when there is preferred stock, or stock analogous to preferred, sometimes has a real preference in regard to voting, for there are instances where the preferred gives up the right to vote as a consideration for its receiving regular dividends. The usual provision is that if such disbursements are discontinued for a certain period, varying with the individual corporation, the preferred stock shall resume its voting power. Leading corporations in which the common stock has exclusive voting power, under the foregoing conditions, are American Smelters Securities, American Tobacco, Interborough-Metropolitan, Royal Baking Powder, and United Cigar Manufacturers' Company. All of them, with

the exception of the Interborough-Metropolitan Company, have maintained regular dividends; the latter defaulted in its obligations toward its preferred stock in 1907, so that at the present time this issue has full voting rights.

CLASSIFICATIONS OF STOCK CERTIFICATES ACCORDING TO THE RIGHTS AND LIMITATIONS ATTACHING TO VARIOUS TYPES OF STOCKS.

1. Common.
2. Deferred.
3. Preferred, as to
   - Dividends (always)
     - Cumulative (industrials, generally).
     - Non-cumulative (railroads, generally).
   - Assets
     - Railroads (not often).
     - Industrials (generally).
   - Voting power
     - Exclusive (seldom).
     - Special (often).
   - Other features
     - Callable.
     - Convertible.
     - Participating.
4. Stocks analogous to Preferred
   - Interest-bearing.
   - Special stock.
   - Guaranteed.
   - Founders'.
5. Debenture.

Common stock generally has the right to receive all the surplus remaining for dividends after the preferred has been paid its stipulated percentage; and in a growing country such as the United States this feature is valuable, provided there is any worth in the company. The Union Pacific Railroad common receives 10 per cent, but the preferred is forever limited to 4 per cent. The American Tobacco Company began with a regular 6 per cent dividend on the preferred and 20 per cent on the common, but increased the amount paid on the common almost annually,

until now it stands at 35 per cent. These two companies are exceptional, but there are scores of well-known corporations, such as Atchison, American Light and Traction, American Radiator, American Snuff, H. B. Claflin Company, Eastman Kodak, and Philadelphia Company, to name only a few, where the common receives more, and frequently a great deal more, than the preferred. It is to be noted, however, that in some cases the preferred participates in the surplus left after dividends of a certain percentage on the common have been paid. This class of preferred stock, and its relation to the junior issues, will be treated later in its appropriate place. It is evidently not an advantage to the common stock to have such preferred stock ahead of it.

Common stock usually has the right to share equally with the preferred in the corporate assets on the dissolution of the company. In many cases, however, especially the New Jersey industrials, which include practically all the large "trusts," the preferred stock has a preference in this respect. It is evident that in corporations where the common stock receives a large dividend, as those named in the preceding paragraph, that on the distribution of the property producing such a revenue the common would receive more than the preferred. Conversely, if the company were weak, and especially if preferred dividends were in default, it is easily conceivable that the common would receive little or nothing, as in the latter case all back cumulative dividends are generally treated as an additional part of the preferred capitalization.

"Deferred" stock is an issue commonly used in England, but only infrequently met with in the United States. The name itself is largely explanatory of its nature. It is an issue on which dividends are deferred until dividends on some other variety of stock, or interest on some particular bonds, have been paid. The common stock of companies possessing this issue is usually divided into two parts—one,

the "B," or ordinary stock, and the deferred, or "A" stock, which receives no dividends until a certain fixed rate has been paid upon the "B" stock. Both of these issues are junior, of course, to the "preference stock," as it is called in England. The corporations which possess this class of stocks are usually English either in their inception, location or management. In this country we may mention Arizona Copper, and the Alabama, New Orleans, Texas & Pacific Junction Railways, Limited, as examples. The old Alabama Great Southern Railroad, which has merged into an American company of the same name in 1906, and the National Railroad of Mexico, merged with the Mexican Central in 1908 into the National Railways Company of Mexico, both possessed this feature. None of these issues, however, has ever been of importance on the stock exchange.

Having explained the nature of deferred stock, we may now consider *preferred* stock. This class may have a preference in any one, any two, or all three, of three particulars; i. e., dividends, always; assets, generally; and voting power, at times. It may also be "callable," "convertible," or "participating."

Such stock always has a preference over the common as regards dividends, which may be either "cumulative," or "non-cumulative," the former being in the nature of a fixed charge, because if the corporation is unable to pay the dividend in one year, it must be paid in succeeding years, together with the dividends for those years, before the common can receive anything. No such duty attaches to non-cumulative stock. If the dividend cannot be paid this year, the rights of the common to share in next year's earnings are in nowise impaired. "Railroads are non-cumulative, industrials generally cumulative," so runs the rough-and-ready distinction. It is not exact, since, as the accompanying table shows, there are numerous railroads that have a cumulative dividend feature in their preferred stock issue:

It is of importance to notice that of late it seems cus-

Name.	Amount of Preferred Stock Outstanding.	Cumulative Rate.	Remarks.
Allegheny Valley	$17,174,000	3%	Mostly exchanged for Pennsylvania R. R. stock.
Central Pacific	13,600,000	4%	
Chicago & Alton	879,300	4%	"Prior lien and participating stock."
Cincinnati, New Orleans & Texas Pacific	2,453,400	5%	
Rutland	9,057,600	7%	About 180% in arrears.

tomary in railroad reorganizations to insert a cumulative clause for the preferred stock in the new charter. But dividends do not become cumulative for a few years, in order to give the road an opportunity to become firmly established before it must meet the fixed cumulative dividend obligation. Pere Marquette first preferred stock, to the extent of over eleven millions, became a 4 per cent cumulative issue after June, 1911; Chicago Great Western preferred, over forty-one millions, is to be 4 per cent cumulative after June, 1914; the Seaboard Company, the holding corporation for the Seaboard Air Line, gave 5 per cent cumulative dividends, after July, 1910, on its issue of over six millions of first preferred. In fact, there is over $150,000,000 of preferred railway capital that is now, or soon will be, receiving cumulative dividends. But this amount, large as it may seem, is relatively small, compared with the total of more than $1,500,000,000 of preferred stock of American railroads outstanding.

The general rule referred to a moment ago is correct in stating that industrial preferred stock issues are generally cumulative, since about two-thirds of them contain this feature. Among the important corporations that have *not* included this cumulative feature may be mentioned: American Car and Foundry, American Linseed, the Pacific Coast Company issues, Pressed Steel Car, Sloss-Sheffield, and United States Rubber, first and second preferred. These companies, however, are not important relatively in their

aggregate capital when compared with American Smelting, American Sugar, American Tobacco, United States Steel, and other large issues which contain the cumulative feature. The non-cumulative preferred shares among industrials generally represent corporations not of the first rank. The large companies—the "trusts"—had to make their preferred stock attractive to investors by adding the cumulative feature when they came to market their securities in the great era of trust promotion.

Under the subject of common stocks, the preference as to assets on dissolution which the preferred often enjoys was spoken of. This feature is quite general, as was there stated, among industrials, but not common in the case of railroads. The following important railway systems, however, have incorporated this feature in their charters: Atchison, Chicago & Alton, Chicago Great Western, Hocking Valley, National Railways of Mexico, first and second preferred in order; Norfolk & Western, Pere Marquette, Rock Island, and Seaboard Company. In this list will be noted the three recently reorganized corporations which have cumulative dividends. Evidently it is becoming customary to give the preferred stock of new railways as many benefits as possible. In the case of industrials it is advisable to reverse the classification, as was done under dividends, and name only those stocks which are *not* preferred as to assets, viz.: American Sugar, Philadelphia Company, Pittsburg Coal, and United Railways of St. Louis. Practically every large industrial concern has its preferred stock protected by giving it this preference should it ever become necessary to distribute the corporate assets. This, of course, will generally be an advantage, but in the case of very strong companies it may not be, as has already been pointed out. To obviate this a few concerns, all unimportant, have provisions like the Merchants Warehouse Company, to the effect that the preferred stock has the first claim on all assets up to $100 a share, and then shares the

balance with the common after that issue has received $150 a share. As stated before, according to the laws of the State of New Jersey, under which most of the large industrials have incorporated, preferred stockholders are to receive preference in the distribution of corporate assets on dissolution, up to par, the balance going to the common stock (Act of 1896, sec. 86, ch. 185). In a few instances the preferred stock has a preference to an amount over par. Dominion Coal, for example, is preferred up to $115 a share. Electric Storage Battery, on the other hand, is only preferred up to $10 a share, although the par value is $50. In most cases, too, unpaid cumulative dividends must be settled for out of assets before the common stock can receive anything.

The superior voting right which the common stock sometimes possesses has already been spoken of. The preferred, likewise, in some instances, carries the entire voting power, though not so often as the common, and generally in less important corporations. The Rock Island Company is the only example of first rank where the preferred stock has exclusive voting power. This fact was instrumental in the stock exchange investigation of the sensational rise in the common stock on December 27, 1909, and its equally sudden decline, for it conclusively negatived the idea of a "fight for control," and stamped the movement as purely manipulative. On the other hand, the preferred stock often has a voting preference in regard to special matters—usually in case of the creation or increase of funded debt, or the enlargement of the preferred issue itself. More than a majority of the issue, usually two-thirds to three-fourths, is required to sanction such changes. The following preferred stock issues, among others, may be cited as possessing such features: Atchison, National Railways of Mexico, Norfolk & Western, Reading, both first and second preferred, Southern, American Can, American Snuff, Central Leather, Interborough-Metropolitan, Sears-Roebuck & Co., United

Cigar Manufacturers, etc. As a general rule, such provisions are not of great practical value.

Mention may be made here of the various classes of preferred stock, and the safeguard that is occasionally thrown around preferred dividends in the shape of what may be called "dividend funds." The difference between a first and second preferred stock is this: that while both are senior to the common, the first preferred ranks ahead of the second in regard to receiving dividends, and in some cases has priority as regards assets, also. Of the corporations whose stocks are active on the New York Exchange only about 5 per cent possess two or more classes of preferred. Space will not permit the giving of a complete list of corporations having more than one issue of preferred stock. A few important corporations, however, should be mentioned as belonging to this class: Colorado & Southern, Erie, National Railways of Mexico, New York, Chicago & St. Louis, Pere Marquette, Reading, Seaboard Company, St. Louis & San Francisco, Wheeling & Lake Erie, American Smelters Securities, Associated Merchants, H. B. Claflin Company, Chicago Railways, Pacific Coast, and United States Rubber. All of these corporations have two classes of preferred stock, except the Chicago Railways Company, which has three, as has also Concord & Montreal. No instance of a corporation having more than three classes of preferred stock has been found.

A few corporations have made provision for the accumulation of a certain fund out of which dividends on the preferred shall be paid during times of business depression, when earnings are not sufficient to meet such payments. The National Railways Company of Mexico affords an example. To insure semi-annual payments of one per cent on the first preferred for three years from January 1, 1908, a separate fund of \$1,800,000 of prior lien bonds and \$1,200,000 of guaranteed general bonds was set aside, and these or their proceeds may be drawn upon to the extent that net

profits shall not be sufficient to make such payments. A similar provision attaches to the preferred stock of United Factories, Limited. United Cigar Manufacturers and Sears-Roebuck & Co. have requirements that a surplus of \$1,000,000, in each case, shall be accumulated before any dividend shall be paid on the common. This, of course, serves as a protection to the preferred stockholders, for if there were no such surplus when net earnings were little above the amount needed for preferred dividends, it might not be deemed advisable to declare such dividends, unless there were such a surplus fund to fall back upon for working capital. But, as said before, such provisions are infrequent.

It is proper to state here that what is commonly known as "preferred" stock need not necessarily, in many cases, be called by that name at all. Under the laws of many states, stock possessing the characteristics of preferred stock may be known by almost any name, so long as that name does not generally import some other variety of stock. Concord & Montreal has its stock divided into classes I, II, III, and IV, class IV corresponding to common stock. In this case, however, the distinction is of very little practical account, because all four classes are guaranteed 7 per cent dividends by the Boston & Maine Railroad. With the Chicago Railways Company, however, it is different, since its "participation certificates," series I, II and III, as explained previously, are really preferred, while series IV is common. At any rate, the immense majority of corporations call their preferred stock simply "preferred."

It should next be noted that preferred stocks may possess any one of three special features—they may be "callable," "convertible" or "participating." Very many preferred stocks are issued to procure money for corporate purposes on the inception of the company, when not much could be realized by the sale of common stock, and bonds could be marketed only at a discount. Such companies may

have hopes that in time their business will so improve that by issuing bonds at a low interest rate, or by selling additional common stock they can retire the preferred stock, leaving the common stock in a much better position. Hence the callable feature may be inserted. This is never obligatory on the corporation, but merely optional with the directors. It is the opposite of the convertible feature, which depends on the stockholders' option. On the following page is a table of callable preferred stocks, showing their provisions as to the time of redemption, and the calling price. If no time is specified, the company's option is understood.

A much larger list could be compiled, but it is better to present only typical or fairly large companies. The industrials are generally redeemable at a premium, and are hedged with definite provisions regarding the time at which the company may exercise its right. The railroads, on the contrary, are nearly always callable at par, and at any time the company may choose. It is generally considered a disadvantage to have a stock callable, as the holder must then seek new fields for his capital, usually just when the investment begins to look attractive. A company never calls stock when it is in difficulties; Tonopah, of Nevada, called its preferred just before it began dividend payments on the common; and Northern Pacific, which was called at par, January 1, 1902, had been paying dividends only a few years.

On the other hand, it is usually advantageous to possess a *convertible* stock. Here the option is with the stockholder, not with the company. The Reading Company's second preferred stock is an exception, being convertible into one-half first preferred and one-half common at par on vote of the directors. As the common is now selling about \$30 above its par of \$50, and the first preferred only a little below par, the convertible feature is valuable, and explains why the second preferred sells at a level considerably above the first. There is, however, a clause that is seldom repro-

TABLE OF CALLABLE PREFERRED STOCKS.

Railroads.	Time.	Price.	Remarks.
Chicago Gr. Western		Par and div'nds	"If and when allowed by law."
Erie, 1st and 2d p'f'd		Par	
Hocking Valley		Par	
Reading, 1st p'f'd		Par	
Reading, 2d p'f'd		Par	"If and when allowed by law."
Seaboard Co., 1st p'f'd		Par	
Seaboard Co., 2d p'f'd	After 1912	110	"Provided 1st preferred has been redeemed or converted."
Industrials.			
American Cotton Oil		105	
Am. Cities Ry. and Light	On any dividend date	107½ and div'nds	
Am. Smelters, Secs. "B"	After 1930	Par	
Amer. Typefounders	On 30 days' notice.	105	"Only by vote of two-thirds of directors."
Borden's Cond. Milk		110	"All, or any."
Consolidated Gas, of Baltimore		120 and div'nds	
Dominion Coal and Iron	After May 1, 1910.	125 and div'nds	If not previously converted into common.
Dominion Iron and Steel	On 3 mo's' notice.	115 and div'nds	Subject to conversion for 30 days after notice.
General Asphalt	On 90 days' notice.	110	Subject to conversion during period of notice.
Michigan State Telephone	Feb. 1 of any year.	Par and div'nds	
National Lead		Par	
Sears, Roebuck & Co.		125 and div'nds	"All, or any"
United Railways Investment		110 and div'nds	

duced in statistical works, i. e., that the second is *callable* at par, "if and when allowed by law," which is apparently unknown, or if known, disregarded, by those who keep the second preferred at its present price level, in the hope that the directors will allow conversion. It reminds one of the story, probably untrue, that Mr. Harriman did not know,

when he bought Northern Pacific preferred that the stock could be called before the directors took that action. Certain it is that their power so to do was never paraded before the public, and it lay, a secret to the "outsiders," in the recesses of the railroad's charter.

Among industrials, Allis-Chalmers preferred stock is convertible into common at par, but, of course, no one is doing so, as the common is selling around 12, and the preferred about 40. Associated Merchants first preferred stock is convertible into second preferred or common stock at par while the books are open; Dominion Coal preferred, into common at par before May 1, 1910; and Dominion Iron and Steel preferred into common at par, and at any time. Electric Storage Battery allows conversion on the same terms as the Dominion Iron and Steel Company, and practically all of the preferred has been converted. The General Asphalt Company allows conversion on the basis of $150 common stock for $100 preferred; and the Hudson & Manhattan Railway, into common at 110. The list is not so long as that of the callable preferred issues. Southern Pacific, on July 15, 1909, gave its preferred stockholders three options; $115 in cash, or $20 cash and $100 in 4½ per cent twenty-year debenture bonds, or conversion into common, par for par. Practically all of the holders of the preferred issue availed themselves of the conversion privilege. The holders took a stock paying one per cent less dividend than they formerly received, but the company has as large possibilities before it as Union Pacific did a few years ago, and they undoubtedly will be rewarded in the end, for they now have a "general" stock, which has the right to all earnings after interest charges have been met. The conversion feature as attached to bonds is old and much employed, but when connected with preferred stocks is comparatively recent, and has been criticised in court decisions.

The participating feature of certain preferred stocks is comparatively unknown to the public; yet it is of the ut-

most importance, for it is practically only in this class of preferred stocks that the holder has an income unlimited except by the company's earning power. In cumulative preferred stocks he is nearly always limited to his fixed percentage, but here he shares with the common stock, the surplus remaining after a certain amount has been paid on that class. Following is a table showing the principal railroad and industrial companies that have included this feature, together with the terms of the participation:

TABLE OF PARTICIPATING PREFERRED STOCKS.

Railroads.	Preferred Receives.	Then Common Receives.	After Which.
Buffalo, Roch. & Pittsbg.	6%	6%	Both share pro rata.
C., M. & St. Paul	7%	7%	Both share pro rata.
Chicago & Northwestern	7%	7%	Preferred 3%, then common 3%, then share pro rata.
C., St. P., M. & O.	7%	7%	Both share pro rata.
Hocking Valley	4%	4%	Both share pro rata.
Iowa Central	5%	5%	Both share pro rata.
Lake Erie & Western	6%	6%	Both share pro rata.
Minn. & St. Louis	5%	5%	Both share pro rata.
M., St. P. & S. S. M.	7%	7%	Both share pro rata.
N. Y. C. & St. L., 1st p'f'd	5%	5%	Second preferred 5%, then *all* share.
Pittsburg, Clev., Cin. & St. Louis	4%	3%	Preferred 5%, then common 5%, then share.
Wabash	7%	7%	Both share equally.
Wisconsin Central	4%	4%	Both share equally.
Industrials.			
Allis-Chalmers	7%	7%	Preferred receives 1% extra.
Associated Merchants, 1st and 2d preferred	7%	7%	Both preferreds receive ½% for each 1% paid on common over 7%.
Consolidated Traction	6%	6%	Both share equally.
Electric Storage Battery	1%	1%	Both share equally.
Pacific Coast, 2d preferred	4%	4%	Both share equally.
Westinghouse Electric	7%	7%	Both share equally.

Among the railroads, Chicago & North Western preferred stock is now receiving 1 per cent additional, and the same is true of the Pittsburg, Cincinnati, Chicago & St. Louis

Railroad. In the industrials, Pacific Coast second preferred is now on a 5 per cent basis with the common; Electric Storage Battery has 4 per cent paid to it instead of one per cent; Westinghouse Electric for four years before the panic of 1907, which threw it into the hands of a receiver, was paid 10 per cent, and is now paying its regular 7 per cent. In a few of these companies, such as Allis-Chalmers of Wabash, the participation feature is of little value, as there is small chance that earnings will ever permit of any payments at all on the common. However, most of the corporations, whose preferred stocks are not now participating with the common, are paying regular dividends on their senior issue, and there is a fair prospect that in time, as the country develops and grows richer, the earnings will so increase that the right to participate with the common in surplus earnings will be a valuable feature of the preferred. The same remarks apply to conversion, which may not be advisable now, but which, with the onward march of this "bull" country, as it has frequently been termed, will in the future become a prized feature of stock that has been bought for the "long pull."

Following our classification of stocks we may now consider those stocks which are analogous to preferred. The first of these is interest-bearing stock which is really only another name for preferred stock. For interest (instead of dividends) must be paid upon it before there can be any disbursements on the common. Paradoxical as it may seem to the idea of a stock contrasted with that of a bond, the payment of interest may be enforced at law, as the subscription to the stock is regarded "as a contract in the nature of an agreement to pay a dividend, but is lawful only when it can be construed as requiring payment of such interest from profits alone." Such issues are obsolete today. There is no reason, however, why a corporation should not issue such stock, should it deem it advisable. From the records we have selected the following examples:

Detroit & Milwaukee, acquired by the Great Western of Canada, which in turn was absorbed by the Grand Trunk.

Cleveland & Toledo, leased to the Cleveland, Painesville & Ashtabula, which was consolidated with the Lake Shore.

Vermont & Massachusetts, leased to Boston & Maine.

Pittsburg & Connellsville, merged with the Baltimore & Ohio.

Pittsburg & Steubensville, acquired by the Steubensville & Indiana, which was taken over by the Pittsburg, Chicago & St. Louis, which was ultimately absorbed by the Pennsylvania Company.

Troy & Greenfield, acquired by the Troy & Boston, which was taken over by the Fitchburg, which in turn was leased to the Boston & Maine.

All of the above companies were comparatively small, and all have been absorbed by larger systems, generally leaving no trace of their stock. Consequently, the subject is of but little more than academic interest.

"Special stock" is a creation of certain Massachusetts statutes, especially the Acts of 1855 and 1882. Under the latter enactment, manufacturing "and other corporations," by vote of three-quarters of their stockholders at a meeting called especially for this purpose, may authorize "special stock," which must never exceed two-thirds of the actual capital, bearing semi-annual dividends not exceeding 4 per cent and subject to redemption at par after a fixed date, which must be expressed on the certificate. The holder of such stock is in no case liable for the debts of the corporation. Instances of such stock crop out now and then because of lawsuits over the rights of their holders, but as these generally only occur after the insolvency of the corporation, they are of little use if we wish a present example. The Boston Machine Company had such stock, as did the Greenfield Tool Company, but both are defunct. The nearest modern analogy is a callable preferred stock, but it also resembles in some ways a short-term note, for the obligation

to pay dividends is absolute, not, as in interest-bearing or ordinary preferred stock, contingent on there being sufficient profits so to do, and it is also usually redeemable in a short time.

"Guaranteed stock" is a term properly applied to the stock of a company, the dividends on which are guaranteed by another corporation, provided there are sufficient earnings to meet them, but not otherwise. It is sometimes erroneously employed as describing preferred stock, i. e., the corporation guaranteeing the dividends on its own stock. Guaranteed stocks usually arise from a consolidation or lease of one road, or industrial corporation, with or to another, and are much more frequently found in the case of railroads than industrials. A full list of all the guaranteed stocks in the country would occupy pages, and thus only a few important examples are given:

Railroad.	Guarantor.	Terms.
Catawissa	Reading	5% on stock, and $8,000.
Central of Vermont	Grand Trunk	Traffic guarantee.
Cleveland & Pittsburg	Penna.	7% on stock, and bond interest.
Concord & Montreal	B. & M.	7% on stock.
Delaware	P. W. & B. (Penna.)	Net earnings.
Fitchburg	B. & M.	5% on preferred, 1% on common, bond interest and expenses.
Old Colony	N. Y., N. H. & H.	7%, and stock convertible into New Haven.
Pittsburg, Ft. Wayne, etc.	Penna.	7% on stock and on "special improvement," etc.

Among industrial corporations guarantees of stock are rare. American Smelters Securities, preferred "B," is the only example of importance. They are generally confined to public service corporations. Most guarantees are successful—the guarantor maintaining the dividends promised. Some are not, but there are few as bad as the lease of the Pere Marquette to the Cincinnati, Hamilton & Dayton for 999 years, in March, 1905, for 5 per cent on the common and 4 per cent on the preferred of the former, both com-

panies going into the hands of a receiver in December of the same year. The lease was subsequently annulled. It argues a close study of the earnings and financial condition of the company itself, a careful scrutiny of the affairs of the guarantor, and not the mere acceptance of the word "guarantee" as proof of the possession of a gilt-edged investment.

The leased-line stock of the Illinois Central, amounting to $10,000,000, and paying 4 per cent, secured by the deposit of stocks of equal value, compared with $123,552,000 common, may be said, in a sense, to be "guaranteed," though it is not within the definition given above. Similarly, the stocks with provisions for the accumulation of special funds, or surpluses, mentioned before, have something *in the nature* of a guarantee, though they are evidently not "guaranteed."

"Founders' stock" is practically unknown in this country. No instance can be found in the manuals, though it may exist in small corporations. Briefly, it may be said to be stock ranking ahead of preferred, entitled to a certain fixed dividend and then to a certain proportion of the surplus after dividends on all classes have been paid. Assume a corporation with $100,000 6 per cent founders' stock, $4,900,000 6 per cent preferred, and 5,000,000 common stock, and a balance for dividends for the year of $1,000,000. The founders' stock would receive $6,000, the preferred $294,000, and the common, say, $250,000. The surplus for the year would then be $450,000. The founders' stock is entitled to a certain proportion of this—fixed by the articles of incorporation—usually one-quarter to one-half. Thus, in addition to its 6 per cent, this class would be paid from $112,500 to $225,000, making an extra dividend of from 112½ to 225 per cent, according to the proportion of the surplus it would receive. If we were to capitalize the last figure at 6 per cent, the stock would be worth about $3,800 a share. There are other provisions concerning

the method of arriving at the amount to be distributed in dividends, but this is the most usual. It was formerly common in England, but is now looked upon with disfavor. Such stock is usually given to promoters, or to persons of influence in consideration of their lending the weight of their names to new corporations, and is, naturally, highly valued by its fortunate possessors. Under the laws of New Jersey it is legal to create such stock.

Having described the various classes of preferred stocks and their characteristics, and those analogous to preferred issues, there still remains for discussion the so-called debenture stock. This class of stock may be said to be on the margin between mortgage bond issues and regular stock issues. To the ordinary person a "debenture" signifies a non-mortgage bond. But it is also used to describe a stock. The whole amount secured may be "treated as borrowed capital consolidated into one mass for the sake of convenience," and certificates issued entitling the holder "to a certain sum, part of this mass." It differs from stock in that the company promises, generally in the form of a covenant, to pay interest on specified dates. This interest has priority over dividends on any class of *stock* whatever, whether guaranteed or not. Such issues are common in England and Canada, but rare in the United States, though debenture bonds are well known here. The old Chicago Great Western Railway had such an issue, which, as it should, fared much better in the reorganization than either of the preferred stocks. The Green Bay & Western Railroad has two classes of debentures—class "A," $600,000; class "B," $7,000,000—compared with $2,500,000 of common stock. The Canadian Pacific, also, has a large issue of irredeemable debenture stock—for such stock may be thus issued, or with provisions providing for redemption after a certain date. The Canadian Northern Ontario has debentures to be paid off in 1936, while those of the Canadian Northern Quebec are perpetual.

Throughout this classification nothing has been said of values, the present task being mainly one of exposition, and not of advice. In closing, we express the hope that intending purchasers will look well to the class of stock in which they contemplate investing, examining *all* of the provisions of that particular issue, consulting, if necessary, the articles of incorporation of the company. Only by knowing the provisions of the stock certificate—is it callable or convertible, participating or not, preferred as to assets, etc., and any other special features that may exist—can an investor be prepared, not only to avoid losses, but to gain safety and profits. A fundamental error in regard to the features of the stock may defeat the results of the most painstaking analysis of value, and when such provisions can usually be so easily ascertained, there is no reason for encountering risks, or allowing profits to escape that might otherwise accrue.

STOCK MARKETS AND EXCHANGES.

FROM OFFICIAL REPORT ON NEW YORK STOCK EXCHANGE.

The Subject in General.

Markets have sprung into being wherever buying and selling have been conducted on a large scale. Taken in charge by regular organizations and controlled by rules, such markets become exchanges. In New York City there are two exchanges dealing in securities and seven in commodities. In addition there is a security market, without fixed membership or regular officers, known as the "Curb." The exchanges dealing in commodities are incorporated, while those dealing in securities are not.

Commodities are not held for permanent investment, but are bought and sold primarily for the purpose of commercial distribution; on the other hand, securities are primarily held for investment; but both are subjects of speculation. Speculation consists in forecasting changes of value and buying or selling in order to take advantage of them; it may be wholly legitimate, pure gambling, or something partaking of the qualities of both. In some form it is a necessary incident of productive operations. When carried on in connection with either commodities or securities it tends to steady their prices. Where speculation is free, fluctuations in prices, otherwise violent and disastrous, ordinarily become gradual and comparatively harmless. Moreover, so far as commodities are concerned, in the absence of speculation, merchants and manufacturers would themselves be forced to carry the risks involved in changes of prices and to bear them in the intensified condition resulting from sudden and violent fluctuations in value. Risks of this kind which merchants and manufacturers still have to assume are reduced in amount, because of the speculation prevailing;

and many of these milder risks they are enabled, by "hedging," to transfer to others. For the merchant or manufacturer the speculator performs a service which has the effect of insurance.

In law, speculation becomes gambling when the trading which it involves does not lead, and is not intended to lead, to the actual passing from hand to hand of the property dealt in. Thus, in the recent case of Hurd v. Taylor (181 N. Y., 231), the Court of Appeals of New York said:

"The law of this State as to the purchase and sale of stocks is well settled. The purchase of stocks through a broker, though the party ordering such purchase does not intend to hold the stocks as an investment, but expects the broker to carry them for him with the design on the part of the purchaser to sell the stocks again when their market value has enchanced, is, however speculative, entirely legal. Equally so is a 'short sale,' where the seller has not the stock he assumes to sell, but borrows it and expects to replace it when the market value has declined. But to make such transactions legal, they must contemplate an actual purchase or an actual sale of stocks by the broker, or through him. If the intention is that the so-called broker shall pay his customer the difference between the market price at which the stocks were ordered purchased and that at which they were ordered sold, in case such fluctuation is in favor of the customer, or that in case it is against the customer, the customer shall pay the broker that difference, no purchases or sales being made, the transaction is a wager and therefore illegal. Such business is merely gambling, in which the so-called commission for purchases and sales that are never made is simply the percentage which in other gambling games is reserved in favor of the keeper of the establishment."

This is also the law respecting commodity transactions.

The rules of all the exchanges forbid gambling as defined by this opinion; but they make so easy a technical delivery

of the property contracted for that practical effect of much speculation, in point of form legitimate, is not greatly different from that of gambling. Contracts to buy may be privately offset by contracts to sell. The offsetting may be done, in a systematic way, by clearing houses, or by "ring settlements." Where deliveries are actually made, property may be temporarily borrowed for the purpose. In these ways speculation which has the legal traits of legitimate dealing may go on almost as freely as mere wagering, and may have most of the pecuniary and immoral effects of gambling on a large scale.

A real distinction exists between speculation which is carried on by persons of means and experience, and based on an intelligent forecast, and that which is carried on by persons without these qualifications. The former is closely connected with regular business. While not unaccompanied by waste and loss, this speculation accomplishes an amount of good which offsets much of its cost. The latter does but a small amount of good and an almost incalculable amount of evil. In its nature it is in the same class with gambling upon the race-track or at the roulette table, but is practiced on a vastly larger scale. Its ramifications extend to all parts of the country. It involves a practical certainty of loss to those who engage in it. A continuous stream of wealth, taken from the actual capital of innumerable persons of relatively small means, swells the income of brokers and operators dependent on this class of business; and in so far as it is consumed like most income, it represents a waste of capital. The total amount of this waste is rudely indicated by the obvious cost of the vast mechanism of brokerage and by manipulators' gains, of both of which it is a large constituent element. If there were not a continuous influx of new customers, replacing those whose losses force them out of the "Street," this costly mechanism of speculation could not possibly be maintained on anything like its present scale.

The Problem to Be Solved.

The problem, wherever speculation is strongly rooted, is to eliminate that which is wasteful and morally destructive, while retaining and allowing free play to that which is beneficial. The difficulty in the solution of the problem lies in the practical impossibility of distinguishing what is virtually gambling from legitimate speculation. The most fruitful policy will be found in measures which will lessen speculation by persons not qualified to engage in it. In carrying out such a policy exchanges can accomplish more than legislatures. In connection with our reports on the different exchanges, as well as on the field of investment and speculation which lies outside of the exchanges, we shall make recommendations directed to the removal of various evils now existing and to the reduction of the volume of speculation of the gambling type.

The New York Stock Exchange.

The New York Stock Exchange is a voluntary association, limited to 1,100 members, of whom about 700 are active, some of them residents of other cities. Memberships are sold for about $80,000. The Exchange as such does no business, merely providing facilities to members and regulating their conduct. The governing power is in an elected committee of forty members and is plenary in scope. The business transacted on the floor is the purchase and sale of stocks and bonds of corporations and governments. Practically all transactions must be completed by delivery and payment on the following day.

The mechanism of the Exchange, provided by its constitution and rules, is the evolution of more than a century. An organization of stock brokers existed here in 1792, acquiring more definite form in 1817. It seems certain that for a long period the members were brokers or agents only; at the present time many are principals as well as agents,

trading for themselves as well as for their customers. A number of prominent capitalists hold memberships merely for the purpose of availing themselves of the reduced commission charge which the rules authorize between members.

The volume of transactions indicates that the Exchange is today probably the most important financial institution in the world. In the past decade the average annual sales of shares have been 196,500,000, at prices involving an annual average turnover of nearly $15,500,000,000; bond transactions averaged about $800,000,000. This enormous business affects the financial and credit interests of the country in so large a measure that its proper regulation is a matter of transcendent importance. While radical changes in the mechanism, which is now so nicely adjusted that the transactions are carried on with the minimum of friction, might prove disastrous to the whole country, nevertheless measures should be adopted to correct existing abuses.

Patrons of the Exchange.

The patrons of the Exchange may be divided into the following groups:

(1) Investors, who personally examine the facts relating to the value of securities or act on the advice of reputable and experienced financiers, and pay in full for what they buy.

(2) Manipulators, whose connection with corporations issuing or controlling particular securities enables them under certain circumstances to move the prices up or down, and who are thus in some degree protected from dangers encountered by other speculators.

(3) Floor traders, who keenly study the markets and the general conditions of business, and acquire early information concerning the changes which affect the values of securities. From their familiarity with the technique of dealings on the Exchange, and ability to act in concert with

others, and thus manipulate values, they are supposed to have special advantages over other traders.

(4) Outside operators having capital, experience, and knowledge of the general conditions of business. Testimony is clear as to the result which, in the long run, attends their operations; commissions and interest charges constitute a factor always working against them. Since good luck and bad luck alternate in time, the gains only stimulate these men to larger ventures, and they persist in them till a serious or ruinous loss forces them out of the "Street."

(5) Inexperienced persons, who act on interested advice, "tips," advertisements in newspapers, or circulars sent by mail, or "take flyers," in absolute ignorance, and with blind confidence in their luck. Almost without exception they eventually lose.

Character of Transactions.

It is unquestionable that only a small part of the transactions upon the Exchange is of an investment character; a substantial part may be characterized as virtually gambling. Yet we are unable to see how the State could distinguish by law between proper and improper transactions, since the forms and the mechanisms used are identical. Rigid statutes directed against the latter would seriously interfere with the former. The experience of Germany and similar legislation is illuminating. But the Exchange, with the plenary power over members and their operations, could provide correctives, as we shall show.

Margin-Trading.

Purchasing securities on margin is as legitimate a transaction as a purchase of any other property in which part payment is deferred. We therefore see no reason whatsoever for recommending the radical change suggested, that margin-trading be prohibited.

Two practices are prolific of losses, namely, buying active

securities on small margins and buying unsound securities, paying for them in full. The losses in the former case are due to the quick turns in the market, to which active stocks are subject; these exhaust the margins and call for more money than the purchasers can supply. The losses in the latter case are largely due to misrepresentations of interested parties and unscrupulous manipulations.

To correct the evident misrepresentation and manipulation, we shall offer in another part of this report certain recommendations. In so far as losses are due to insufficient margins, they would be materially reduced if the customary percentage of margins were increased. The amount of margin which a broker requires from a speculative buyer of stocks depends, in each case, on the credit of the buyer; and the amount of credit which one person may extend to another is a dangerous subject on which to legislate. Upon the other hand, a rule made by the Exchange could safely deal with the prevalent rate of margins required from customers. In preference, therefore, to recommending legislation, we urge upon all brokers to discourage speculation upon small margins, and upon the Exchange to use its influence, and, if necessary, its power, to prevent members from soliciting and generally accepting business on a less margin than 20 per cent.

Pyramiding.

"Pyramiding," which is the use of paper profits in stock transactions as a margin for further commitments, should be discouraged. The practice tends to produce more extreme fluctuations and more rapid wiping out of margins. If the stock brokers and the banks would make it a rule to value securities for the purpose of margin or collateral, not at the current price of the moment, but at the average price of, say, the previous three months (provided that such average price were not higher than the price of the moment), the dangers of pyramiding would be largely prevented.

Short-Selling.

We have been strongly urged to advise the prohibition or limitation of short sales, not only on the theory that it is wrong to agree to sell what one does not possess, but that such sales reduce the market price of the securities involved. We do not think, that it is wrong to agree to sell something that one does not now possess, but expects to obtain later. Contracts and agreements to sell, and deliver in the future, property which one does not possess at the time of the contract are common in all kinds of business. The man who has "sold short" must some day buy in order to return the stock which he has borrowed to make the short sale. Short-sellers endeavor to select times when prices seem high in order to sell, and times when prices seem low in order to buy, their action in both cases serving to lessen advances and diminish declines of price. In other words, short-selling tends to produce steadiness in prices, which is an advantage to the community. No other means of restraining unwarranted marking up and down of prices has been suggested to us.

The legislation of the State of New York on the subject of short-selling is significant. In 1812 the Legislature passed a law declaring all contracts for the sale of stocks and bonds void, unless the seller at the time was the actual owner or assignee thereof or authorized by such owner or assignee to sell the same. In 1858 this act was repealed by a statute now in force, which reads as follows:

"An agreement for the purchase, sale, transfer or delivery of a certificate or other evidence of debt, issued by the United States or by any State, or municipal or other corporation, or any share or interest in the stock of any bank, corporation or joint-stock association, incorporated or organized under the laws of the United States or of any State, is not void, or voidable, because the vendor, at the time of making such contract, is not the owner or possessor of the certificate, or certificates, or other evidence of debt, share or interest."

It has been urged that this statute "specifically legalizes stock gambling." As a matter of fact, however, the law would be precisely the same if that statute were repealed, for it is the well-settled common law of this country, as established by the decisions of the Supreme Court of the United States and of the State courts, that all contracts, other than mere wagering contracts, for the future purchase or sale of securities or commodities are valid, whether the vendor is, or is not, at the time of making such contract, the owner or possessor of the securities or commodities involved, in the absence of a statute making such contracts illegal. So far as any of these transactions are mere wagering transactions, they are illegal, and not enforceable, as the law now stands.

It has been suggested to us that there should be a requirement either by law or by rule of the Stock Exchange, that no one should sell any security without identifying it by number or otherwise. Such a rule would cause great practical difficulties in the case of securities not present in New York at the time when the owner desires to sell them, and would increase the labor and cost of doing business. But, even if this were not the effect, the plan contemplates a restriction upon short sales, which, for the reasons set forth above, seems to us undesirable. It is true that this identification plan exists in England as to sales of bank shares (Leeman act of 1867) ; but it has proved a dead letter. It has also been used in times of apprehended panic upon the French Bourse, but opinions in regard to its effect there are conflicting. While some contend that it has been useful in preventing panics, others affirm that it has been used simply for the purpose of protecting bankers who were loaded down with certain securities which they were trying to distribute, and who, through political influence, procured the adoption of the rule for their special benefit.

Manipulation of Prices.

A subject to which we have devoted much time and thought is that of the manipulation of prices by large interests. This falls into two general classes:

(1) That which is resorted to for the purpose of making a market for issues of new securities.

(2) That which is designed to serve merely speculative purposes in the endeavor to make a profit as the result of fluctuations which have been planned in advance.

The first kind of manipulation has certain advantages, and when not accompanied by "matched orders" is unobjectionable per se. It is essential to the organization and carrying through of important enterprises, such as large corporations, that the organizers should be able to raise the money necessary to complete them. This can be done only by the sale of securities. Large blocks of securities, such as are frequently issued by railroad and other companies, cannot be sold over the counter or directly to the ultimate investor, whose confidence in them can, as a rule, be only gradually established. They must, therefore, if sold at all, be disposed of to some syndicate, who will in turn pass them on to middlemen or speculators, until, in the course of time, they find their way into the boxes of investors. But prudent investors are not likely to be induced to buy securities which are not regularly quoted on some exchange, and which they cannot sell, or on which they cannot borrow money at their pleasure. If the securities are really good and bids and offers bona fide, open to all sellers and buyers, the operation is harmless. It is merely a method of bringing new investments into public notice.

The second kind of manipulation mentioned is undoubtedly open to serious criticism. It has for its object either the creation of high prices for particular stocks in order to draw in the public as buyers and to unload upon them the holdings of the operators, or to depress the prices and in-

duce the public to sell. There have been instances of gross and unjustifiable manipulation of securities, as in the case of American Ice Stock. While we have been unable to discover any complete remedy short of abolishing the Stock Exchange itself, we are convinced that the Exchange can prevent the worst forms of this evil by exercising its influence and authority over the members to prevent them. When continued manipulation exists it is patent to experienced observers.

"Wash-Sales" and "Matched Orders."

In the foregoing discussion we have confined ourselves to bona fide sales. So far as manipulation of either class is based upon fictitious or so-called "wash-sales," it is open to the severest condemnation, and should be prevented by all possible means. These fictitious sales are forbidden by the rules of all the regular exchanges, and are not enforceable at law. They are less frequent than many persons suppose. A transaction must take place upon the floor of the Exchange to be reported, and if not reported does not serve the purpose of those who engage in it. If it takes place on the floor of the Exchange, but is purely a pretense, the brokers involved run the risk of detection and expulsion, which is to them a sentence of financial death. There is, however, another class of transactions called "matched orders," which differ materially from those already mentioned, in that they are actual and enforceable contracts. We refer to that class of transactions, engineered by some manipulator, who sends a number of orders simultaneously to different brokers, some to buy and some to sell. These brokers, without knowing that other brokers have countervailing orders from the same principal, execute their orders upon the floor of the Exchange, and the transactions become binding contracts; they cause an appearance of activity in a certain security which is unreal. Since they are legal and binding, we find a difficulty in suggesting a legislative remedy. But where

the activities of two or more brokers in certain securities become so extreme as to indicate manipulation rather than genuine transactions, the officers of the Exchange would be remiss unless they exercised their influence and authority upon such members in a way to cause them to desist from such suspicious and undesirable activity. As already stated, instances of continuous manipulation of particular securities are patent to every experienced observer, and could without difficulty be discouraged, if not prevented, by prompt action on the part of the Exchange authorities.

Corners.

The subject of corners in the stock market has engaged our attention. The Stock Exchange might properly adopt a rule providing that the governors shall have power to decide when a corner exists and to fix a settlement price, so as to relieve innocent persons from the injury or ruin which may result therefrom. The mere existence of such a rule would tend to prevent corners.

Failures and Examination of Books.

We have taken testimony on the subject of recent failures of brokers, where it has been discovered that they were insolvent for a long period prior to the public declaration of failure, and where their activities after their insolvency not only caused great loss to their customers, but also, owing to their efforts to save themselves from bankruptcy, worked great injury to innocent outsiders. For cases of this character there should be a law analogous to that forbidding banks to accept deposits after insolvency is known; and we recommend a statute making it a misdemeanor for a broker to receive any securities or cash from any customer (except in liquidating or fortifying an existing account), or to make any further purchases or sales for his own account, after he has become insolvent; with the provision that a broker shall be deemed insolvent when he has on his books an ac-

count or accounts which, if liquidated, would exhaust his assets, unless he can show that he had reasonable ground to believe that such accounts were good.

The advisability of requiring by State authority an examination of the books of all members of the Exchange, analogous to that required of banks, has been urged upon us. Doubtless some failures would be prevented by such a system rigidly enforced, although bank failures do occur in spite of the scrutiny of the examiners. Yet the relations between brokers and their customers are of so confidential a nature that we do not recommend an examination of their books by any public authority. The books and accounts of the members of the Exchange should, however, be subjected to periodic examination and inspection pursuant to rules and regulations to be prescribed by the Exchange, and the result should be promptly reported to the governors thereof.

It is vain to say that a body possessing the powers of the board of governors of the Exchange, familiar with every detail of the mechanism, generally acquainted with the characteristics of members, cannot improve present conditions. It is a deplorable fact that with all their power and ability to be informed, it is generally only after a member or a firm is overtaken by disaster, involving scores or hundreds of innocent persons, and causing serious disturbances, that the Exchange authorities take action. No complaint can be registered against the severity of the punishment then meted out; but in most cases the wrongdoing thus atoned for, which has been going on for a considerable period, might have been discovered under a proper system of supervision, and the vastly preponderant value of prevention over cure demonstrated.

Rehypothecation of Securities.

We have also considered the subject of rehypothecating, loaning and other use of securities by brokers who hold them for customers. So far as any broker applies to his

own use any securities belonging to a customer, or hypothecates them for a greater amount than the unpaid balance of the purchase price, without the customer's consent, he is undoubtedly guilty of a conversion under the law as it exists today, and we call this fact to the attention of brokers and the public. When a broker sells the securities purchased for a customer who has paid therefor in whole or in part, except upon the customer's default, or disposes of them for his own benefit, he should be held guilty of larceny, and we recommend a statute to that effect.

Dealing for Clerks.

The Exchange now has a rule forbidding any member to deal or carry an account for a clerk or employe of any other member. This rule should be extended so as to prevent dealing for an account of any clerk or subordinate employe of any bank, trust company, insurance company, or other moneyed corporation or banker.

Listing Requirements.

Before securities can be bought and sold on the Exchange, they must be examined. The committee on Stock List is one of the most important parts of the organization, since public confidence depends upon the honesty, impartiality, and thoroughness of its work. While the Exchange does not guarantee the character of any securities, or affirm that the statements filed by the promoters are true, it certifies that due diligence and caution have been used by experienced men in examining them. Admission to the list, therefore, establishes a presumption in favor of the soundness of the security so admitted. Any securities authorized to be bought and sold on the Exchange, which have not been subjected to such scrutiny, are said to be in the unlisted department, and traders who deal in them do so at their own risk. We have given consideration to the subject of verifying the statements of fact contained in the papers filed with

the applications for listing, but we do not recommend that either the State or the Exchange take such responsibility. Any attempt to do so would undoubtedly give the securities a standing in the eyes of the public which would not in all cases be justified. In our judgment, the Exchange should, however, adopt methods to compel the filing of frequent statements of the financial condition of the companies whose securities are listed, including balance sheets, income and expense accounts, etc., and should notify the public that these are open to examination under proper rules and regulations. The Exchange should also require that there be filed with future applications for listing a statement of what the capital stock of the company has been issued for, showing how much has been issued for cash, how much for property, with a description of the property, etc., and also showing what commission, if any, has been paid to the promoters or vendors. Furthermore, means should be adopted for holding those making the statements responsible for the truth thereof. The unlisted department, except for temporary issues, should be abolished.

Fictitious Trades.

Complaint is made that orders given by customers are sometimes not actually executed, although so reported by the broker. We recommend the passage of a statute providing that, in case it is pleaded in any suit by or against a broker that the purchase or sale was fictitious, or was not an actual bona fide purchase or sale by the broker as agent for the customer, the court or jury shall make a special finding upon that fact. In case it is found that the purchase or sale was not actual and bona fide, the customer shall recover three times the amount of the loss which he sustained thereby; and copies of the finding shall be sent to the district attorney of the county and to the Exchange, if the broker be a member.

Unit of Trading.

The Exchange should insist that all trading be done on the basis of a reasonably small unit (say 100 shares of stock or $1,000 of bonds), and should not permit the offers of such lots, or bids for such lots, to be ignored by traders offering or bidding for larger amounts. The practice now permitted of allowing bids and offers for large amounts, all or none, assist the manipulation of prices. Thus a customer may send an order to sell 100 shares of a particular stock at par, and a broker may offer to buy 1,000 shares, all or none, at 101, and yet no transaction take place. The bidder in such a case should be required to take all the shares offered at the lower price before bidding for a larger lot at a higher price. This would tend to prevent matched orders.

Stock Clearing House.

We have also considered the subject of the Stock Exchange Clearing House. While it is undoubtedly true that the clearing of stocks facilitates transactions which may be deemed purely manipulative, or virtually gambling transactions, nevertheless we are of the opinion that the Exchange could not do its necessary and legitimate business but for the existence of the clearing system, and, therefore, that it is not wise to abolish it.

The transactions in stocks which are cleared are transscribed each day on what are called "clearing sheets," and these sheets are passed into the Clearing House and there filed for one week only. In view of the value of these sheets as proving the transactions and the prices, they should be preserved by the Exchange for at least six years, and should be at the disposal of the courts, in case of any dispute.

Specialists.

We have received complaints that specialists on the floor of the Exchange, dealing in inactive securities, sometimes

buy or sell for their own account while acting as brokers. Such acts without the principal's consent are illegal. In every such case recourse may be had to the courts.

Notwithstanding that the system of dealing in specialties is subject to abuses, we are not convinced that the English method of distinguishing between brokers and jobbers serves any better purpose than our own practice, while its introduction here would complicate business. It should also be noted that the practice of specialists in buying and selling for their own account often serves to create a market where otherwise one would not exist.

Branch Offices.

Complaint has been made of branch offices in the city of New York, often luxuriously furnished and sometimes equipped with lunch rooms, cards, and liquor. The tendency of many of them is to increase the lure of the ticker by the temptation of creature comforts, appealing thus to many who would not otherwise speculate. The governors of the Exchange inform us that they realize that some of these offices have brought discredit on the Exchange, and that on certain occasions they have used their powers to suppress objectionable features. It seems to us that legitimate investors and speculators might, without much hardship, be compelled to do business at the main offices, and that a hard-and-fast rule against all branch offices in the City of New York might well be adopted by the Exchange. In any event, we are convinced that a serious and effective regulation of these branch offices is desirable.

Incorporation of Exchange.

We have been strongly urged to recommend that the Exchange be incorporated, in order to bring it more completely under the authority and supervision of the State and the process of the courts. Under existing conditions, being a voluntary organization, it has almost unlimited power over

the conduct of its members, and it can subject them to instant discipline for wrong-doing, which it could not exercise in a summary manner if it were an incorporated body. We think that such power residing in a properly chosen committee is distinctly advantageous. The submission of such questions to the courts would involve delays and technical obstacles which would impair discipline without securing any greater measure of substantial justice. While this committee is not entirely in accord on this point, no member is yet prepared to advocate the incorporation of the Exchange and a majority of us advise against it, upon the ground that the advantages to be gained by incorporation may be accomplished by rules of the Exchange and by statutes aimed directly at the evils which need correction.

The Stock Exchange in the past, although frequently punishing infractions of its rules with great severity, has, in our opinion, at times failed to take proper measures to prevent wrongdoing. This has been probably due not only to a conservative unwillingness to interfere in the business of others, but also to a spirit of comradeship which is very marked among brokers, and frequently leads them to overlook misconduct on the part of fellow-members, although at the same time it is a matter of cynical gossip and comment in the street. The public has a right to expect something more than this from the Exchange and its members. This committee, in refraining from advising the incorporation of the Exchange, does so in the expectation that the Exchange will in the future take full advantage of the powers conferred upon it by its voluntary organization, and will be active in preventing wrongdoing. Then we believe that there will be no serious criticism of the fact that it is not incorporated. If, however, wrongdoing recurs, and it appears to the public at large that the Exchange has been derelict in exerting its powers and authority to prevent it, we believe that the public will insist upon the incorporation of the Exchange and its subjection to state authority and supervision.

Wall Street as a Factor.

There is a tendency on the part of the public to consider Wall Street and the New York Stock Exchange as one and the same thing. This is an error arising from their location. We have taken pains to ascertain what proportion of the business transacted on the Exchange is furnished by New York City. The only reliable sources of information are the books of the commission houses. An investigation was made of the transactions on the Exchange for a given day, when the sales were 1,500,000 shares. The returns showed that on that day 52 per cent of the total transactions on the Exchange apparently originated in New York City, and 48 per cent in other localities.

The Consolidated Stock Exchange.

The Consolidated Exchange was organized as a mining stock exchange in 1875, altering its name and business in 1886. Although of far less importance than the Stock Exchange, it is nevertheless a secondary market of no mean proportions; by far the greater part of the trading is in securities listed upon the main exchange, and prices are based upon the quotations made there. The sales average about 45,000,000 shares per annum. The fact that its members make a specialty of "broken lots," i. e., transactions in shares less than the 100 unit, is used as a ground for the claim that it is a serviceable institution for investors of relatively small means. But it is obvious that its utility as a provider of capital for enterprises is exceedingly limited; and that it affords facilities for the most injurious form of speculation—that which attracts persons of small means.

It also permits dealing in shares not listed in the main exchange, and in certain mining shares generally excluded from the other. In these cases it prescribes a form of listing requirements, but the original listing of securities is very rarely availed of. The rules also provide for dealing

in grain, petroleum, and other products. Wheat is, however, at present the only commodity actively dealt in, and this is due solely to the permission to trade in smaller lots than the Produce Exchange unit of 5,000 bushels.

There are 1,225 members, about 450 active, and memberships have sold in recent years at from $650 to $2,000. In general the methods of conducting business are similar to those of the larger exchange, and subject to the same abuses.

Very strained relations have existed between the two security exchanges since the lesser one undertook in 1886 to deal in stocks. The tension has been increased by the methods by which the Consolidated obtains the quotations of the other, through the use of the "tickers" conveying them. It is probable that without the use of these instruments the business of the Consolidated Exchange would be paralyzed; yet the right to use them rests solely upon a technical point in a judicial decision which enjoins their removal.

Holding Companies.

Connected with operations on the Stock Exchange are a class of manipulations originating elsewhere. The values of railway securities, for example, depend upon the management of the companies issuing them, the directors of which may use their power to increase, diminish, or even extinguish them, while they make gains for themselves by operations on the exchange. They may advance the price of a stock by an unexpected dividend, or depress it by passing an expected one. They may water a stock by issuing new shares, with no proportionate addition to the productive assets of the company, or load it with indebtedness, putting an unexpected lien on the shareholders' property. Such transactions affect not only the fortunes of the shareholders, who are designedly kept in ignorance of what is transpiring, but also the value of investments in

other similar companies, the securities of which are affected sympathetically. Railroad wrecking was more common in the last half century than it is now, but we have some glaring examples of it in the debris of our street railways today.

The existence and misuse of such powers on the part of directors are a menace to corporate property and a temptation to officials who are inclined to speculate, leading them to manage the property so as to fill their own pockets by indirect and secret methods.

A holding company represents the greatest concentration of power in a body of directors and the extreme of helplessness on the part of shareholders. A corporation may be so organized that its bonds and preferred stock represent the greater part of its capital, while the common stock represents the actual control. Then, if a second company acquires a majority of the common stock, or a majority of the shares that are likely to be voted at elections, it may control the former company, and as many other companies as it can secure. The shareholders of the subsidiary companies may be thus practically deprived of power to protect themselves against injurious measures and even to obtain information of what the holding company is doing, or intends to do, with their property.

As a first step toward mitigating this evil we suggest that the shareholders of subsidiary companies, which are dominated by holding companies, or voting trusts, shall have the same right to examine the books, records and accounts of such holding companies, or voting trusts, that they have in respect of the companies whose shares they hold, and that the shareholders of holding companies have the same right as regards the books, records and accounts of the subsidiary companies. The accounts of companies not merged should be separately kept and separately stated to their individual stockholders, however few they may be.

We may point out the fact that the powers which holding companies now exercise were never contemplated, or imagined, when joint-stock corporations were first legalized. If Parliament and legislatures had forseen their growth, they would have erected barriers against it.

Receiverships.

Our attention has been directed to the well-known abuses frequently accompanying receiverships of large corporations, and more especially public service corporations, and the issue of receivers' certificates. We feel that the numerous cases of long drawn-out receiverships, in some instances lasting more than ten years, and of the issue of large amounts of receivers' certificates which take precedence over even first mortgage bonds, are deserving of most serious consideration.

Legislation providing for a short-time limitation on receiverships, or for a limitation of receivers' certificates to a small percentage of the mortgage liens on the property, could be rendered unnecessary, however, by the action of the courts themselves along these lines, so as to make common past abuses impossible in the future.

Effects of the Money Market on Speculation.

It has been urged that your committee consider the influence of the money market upon security speculation.

As a result of conditions to which the defects of our monetary and banking systems chiefly contribute, there is frequently a congestion of funds in New York City, when the supply is in excess of business needs and the accumulated surplus from the entire country generally is thereby set free for use in the speculative market. Thus there almost annually occurs an inordinately low rate for "call loans," at times less than one per cent. During the prevalence of this abnormally low rate speculation is unduly incited, and speculative loans are very largely expanded.

On the other hand, occasional extraordinary industrial activity, coupled with the annually recurring demands for money during the crop-moving season, causes money stringency, and the calling of loans made to the stock market; an abnormally high interest rate results, attended by violent reaction in speculation and abrupt fall in prices. The pressure to retain funds in the speculative field at these excessively high interest rates tends to a curtailment of reasonable accommodation to commercial and manufacturing interests, frequently causing embarrassment and at times menacing a crisis.

The economic questions involved in these conditions are the subject of present consideration by the Federal authorities and the National Monetary Commission. They could not be adjusted or adequately controlled either through Exchange regulation or State legislation.

The Usury Law.

The usury law of this State prohibits the taking of more than 6 per cent interest for the loan of money, but by an amendment adopted in 1882 an exception is made in the case of loans of $5,000 or more, payable on demand and secured by collateral. It is claimed by some that, since this exception enables stock speculators, in times of great stringency, to borrow money by paying excessively high rates of interest, to the exclusion of other borrowers, a repeal of this provision would check inordinate speculation. We direct attention, however, to the fact that the statute in question excepts such loans as are secured by warehouse receipts, bills of lading, bills of exchange, and other negotiable instruments. Hence, its operation is not limited to Stock Exchange transactions, or to speculative loans in general. Moreover, the repeal of the statute would affect only the conditions when high rates of interest are exacted, which really promote excessive speculation. Finally, our examination indicates that prior to the enactment of the

statute of 1882 such loans were negotiated at the maximum (6 per cent), plus a commission, which made it equivalent to the higher rate; and a repeal of the statute would lead to the resumption of this practice. Therefore, as the repeal would not be beneficial, we cannot recommend any legislation bearing upon the interest laws of the State unless it be the repeal of the usury law altogether, as we believe that money will inevitably seek the point of highest return for its use. In nine states of the Union there are at present no usury laws.

The Curb Market.

There is an unorganized stock market held in the open air during exchange hours. It occupies a section of Broad Street. An enclosure in the center of the roadway is made by means of a rope, within which the traders are supposed to confine themselves, leaving space on either side for the passage of street traffic; but during days of active trading the crowd often extends from curb to curb.

There are about 200 subscribers, of whom probably 150 appear on the curb each day, and the machinery of the operations requires the presence of as many messenger boys and clerks. Such obstruction of a public thoroughfare is obviously illegal, but no attempt has been made by the city authorities to disperse the crowd that habitually assembles there.

This open-air market, we understand is dependent for the great bulk of its business upon members of the Stock Exchange, approximately 85 per cent of the orders executed on the curb coming from Stock Exchange houses. The Exchange itself keeps the curb market in the street, since it forbids its own members engaging in any transaction in any other security exchange in New York. If the curb were put under a roof and organized, this trading could not be maintained.

Its Utility.

The curb market has existed for upwards of thirty years, but only since the great development of trading in securities began, about the year 1897, has it really become important. It affords a public market place where all persons can buy and sell securities which are not listed on any organized exchange. Such rules and regulations as exist are agreed to by common consent, and the expenses of maintenance are paid by voluntary subscription. An agency has been established by common consent through which the rules and regulations are prescribed.

This agency consists solely of an individual who, through his long association with the curb, is tacitly accepted as arbiter. From this source we learn that sales recorded during the year 1908 were roughly as follows:

Bonds	$66,000,000
Stocks, industrials, shares	4,770,000
Stocks, mining, shares	41,825,000

Official quotations are issued daily by the agency and appear in the public press. Corporations desiring their securities to be thus quoted are required to afford the agency certain information, which is, however, superficial and incomplete. There is nothing on the curb which corresponds to the listing process of the Stock Exchange. The latter, while not guaranteeing the soundness of the securities, gives a prima facie character to those on the list, since the stock list committee takes some pains to learn the truth. The decisions of the agent of the curb are based on insufficient data, and since much of the work relates to mining schemes in distant states and territories, and foreign countries, the mere fact that a security is quoted on the curb should create no presumption in its favor; quotations frequently represent "wash sales," thus facilitating enterprises.

Evils of Unorganized Status.

Bitter complaints have reached us of frauds perpetrated upon confiding persons, who have been induced to purchase mining shares because they are quoted on the curb; these are frequently advertised in newspapers and circulars sent through the mails as so quoted. Some of these swindles have been traced to their fountain-heads by the Post Office Department, to which complaint has been made; but usually the swindler, when cornered, has settled privately with the individual complainant, and then the prosecution has failed for want of testimony. Meanwhile the same operations may continue in many other places, till the swindle becomes too notorious to be profitable.

Notwithstanding the lack of proper supervision and control over the admission of securities to the privilege of quotation, some of them are meritorious, and in this particular the curb performs a useful function. The existence of the cited abuses does not, in our judgment, demand the abolition of the curb market. Regulation is, however, imperative. To require an elaborate organization similar to that existing in the exchanges would result in the formation of another curb free from such restraint.

As has been stated, about 85 per cent of the business of the curb comes through the offices of members of the New York Stock Exchange, but a provision of the constitution of that Exchange prohibits its members from becoming members of, or dealing on any other organized Stock Exchange in New York. Accordingly, operators on the curb market have not attempted to form an organization. The attitude of the Stock Exchange is therefore largely responsible for the existence of such abuses as result from the want of organization of the curb market. The brokers dealing on the latter do not wish to lose their best customers, and hence they submit to these irregularities and inconveniences.

Some of the members of the Exchange dealing on the curb have apparently been satisfied with the prevailing conditions, and in their own selfish interests have maintained an attitude of indifference toward abuses. We are informed that some of the most flagrant cases of discreditable enterprises finding dealings on the curb were promoted by members of the New York Stock Exchange.

Reformation of the Curb.

The present apparent attitude of the Exchange toward the curb seems to us clearly inconsistent with its moral obligations to the community at large. Its governors have frequently avowed before this committee a purpose to cooperate to the greatest extent for the remedy of any evils found to exist in stock speculation. The curb market as at present constituted affords ample opportunity for the exercise of such helpfulness.

The Stock Exchange should compel the formulation and enforcement of such rules as may seem proper for the regulation of business on the curb, the conduct of those dealing thereon, and, particularly, for the admission of securities to quotation.

If the curb brokers were notified that failure to comply with such requirements would be followed by an application of the rule of non-intercourse, there is little doubt that the orders of the Exchange would be obeyed. The existing connection of the Exchange gives it ample power to accomplish this, and we do not suggest anything implying a more intimate connection.

Under such regulation, the curb market might be decently housed to the relief of its members and the general public.

The Abuse of Advertising.

A large part of the discredit in the public mind attaching to "Wall Street" is due to frauds perpetrated on the

small investor throughout the country in the sale of worthless securities by means of alluring circulars and advertisements in the newspapers. To the success of such swindling enterprises a portion of the press contributes.

Papers which honestly try to distinguish between swindling advertisements and others, may not in every instance succeed in doing so; but readiness to accept advertisements which are obviously traps for the unwary is evidence of a moral delinquency which should draw out the severest public condemnation.

So far as the press in the large cities is concerned the correction of the evil lies, in some measure, in the hands of the reputable bankers and brokers, who, by refusing their advertising patronage to newspapers notoriously guilty in this respect, could compel them to mend their ways, and at the same time prevent fraudulent schemes from deriving an appearance of merit by association with reputable names.

Another serious evil is committed by men who give standing to promotions by serving as directors without full knowledge of the affairs of the companies, and by allowing their names to appear in prospectuses without knowing the accuracy and good faith of the statements contained therein. Investors naturally pay great regard to the element of personal character, both in the offering of securities and in the management of corporations, and can therefore be deceived by the names used in unsound promotions.

British System Considered.

We have given much attention to proposals for compelling registration, by a bureau of the State government, of all corporations whose securities are offered for public sale in this State, accompanied by information regarding their financial responsibility and prospects, and prohibiting the public advertisement or sale of such securities without a certificate from the bureau that the issuing company has

been so registered. The object of such registration would be to identify the promoters, so that they might be readily prosecuted in case of fraud. Such a system exists in Great Britain. The British "Companies Act" provides for such registration, and the "Directors' Liability Act" regulates the other evil referred to above. Some members of your committee are of the opinion that these laws should be adopted in this country, so far as they will fit conditions here.

This would meet with some difficulties, due in part to our multiple system of State government. If the law were in force only in this State, the advertisement and sale of the securities in question would be unhindered in other markets, and companies would be incorporated in other States, in order that their directors and promoters should escape liability. The certificate of registration might be accepted by inexperienced persons as an approval by State authority of the enterprise in question. For these reasons the majority of your committee does not recommend the regulation of such advertising and sale by State registration.

In so far as the misuse of the post office for the distribution of swindling circulars could be regulated by the Federal authorities, the officials have been active in checking it. They inform us that vendors of worthless securities are aided materially by the opportunity to obtain fictitious price quotations for them on the New York Curb market.

Legislation Recommended.

For the regulation of the advertising evils, including the vicious "tipster's" cards, we recommend an amendment to the Penal Code to provide that any person who advertises, in the public press or otherwise, or publishes, distributes or mails, any prospectus, circular or other statement in regard to the value of any stock, bonds, or other securities, or in regard to the business affairs, property, or financial condition of any corporation, joint-stock association,

copartnership or individual issuing stock, bonds, or other similar securities, which contains any statement of fact which is known to such person to be false, or as to which such person has no reasonable grounds for believing it to be true, or any promises or predictions which he cannot reasonably justify, shall be guilty of a misdemeanor; and, further, that every newspaper or other publication printing or publishing such an advertisement, prospectus, circular, or other statement, shall, before printing or publishing the same, obtain from the person responsible for the same, and retain, a written and signed statement to the effect that such person accepts responsibility for the same, and for the statements of fact contained therein, which statement shall give the address, with street number, of such person; and that the publisher of any such newspaper or other publication which shall fail to obtain and retain such statement shall be guilty of a misdemeanor.

Bucket-Shops.

Bucket-shops are ostensibly brokerage offices, where, however, commodities and securities are neither bought nor sold in pursuance of customers' orders, the transactions being closed by the payment of gains or losses, as determined by price quotations. In other words, they are merely places for the registration of bets or wagers; their machinery is generally controlled by the keepers who can delay or manipulate the quotations at will.

The law of this State, which took effect September 1, 1908, makes the keeping of a bucket-shop a felony, punishable by fine and imprisonment, and in the case of corporations, on second offenses by dissolution or expulsion from the State. In the case of individuals the penalty for a second offense is the same as for the first. These penalties are imposed upon the theory that the practice is gambling; but in order to establish the fact of gambling it is necessary, under the New York law, to show that both parties

to the trade intended that it should be settled by the payment of differences, and not by delivery of property. Under the law of Massachusetts it is necessary to show only that the bucket-shop keeper so intended. The Massachusetts law provides heavier penalties for the second offense than for the first, and makes it a second offense if a bucket-shop is kept open after the first conviction.

Amendment of Law Recommended.

We recommend that the foregoing features of the Massachusetts law be adopted in this State; also that section 355 of the act of 1908 be amended so as to require brokers to furnish their customers *in all cases*, and not merely on demand, the names of brokers from whom shares were bought and to whom they were sold; and that the following section be added to the act:

Witness's privilege:

No person shall be excused from attending and testifying, or producing any books, papers, or other documents before any court or magistrate, upon any trial, investigation, or proceeding initiated by the district attorney for a violation of any of the provisions of this chapter, upon the ground or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to convict him of a crime or subject him to a penalty or forfeiture; but no person shall be prosecuted or subjected to any forfeiture for or on account of any transaction, matter, or thing concerning which he may so testify or produce evidence, documentary or otherwise, and no testimony so given or produced shall be received against him upon any criminal investigation or proceeding.

There has been a sensible diminution in the number of bucket-shops in New York since the act of 1908 took effect.

Continuous quotations of prices from an exchange are indispensable to a bucket-shop, and when such quotations are cut off this gambling ends.

CLASSIFICATION OF BONDS.*

BY FREDERICK LOWNHAUPT.

[From Lownhaupt's "Investment Bonds."]

American financiers have often been under necessity of producing a security with new and attractive features. At times distinctive and peculiar conditions have had to be met. With characteristic ingenuity they have usually succeeded, in consequence of which there is now a diversity of securities that quite demand close study for a full appreciation of their scope and nature. Great corporate needs have produced volume, coincident with which have been developed two characteristics of the bond branch of the security market, variety and novelty. The average investor is perplexed to distinguish various issues so he may make a conservative judgment. He is not alone. Many another, though familiar with finance, is nonplussed to make a clear and comprehensive classification. Some difficulty arises from difference of name where the issues are identical with the exception of some unimportant feature. When the chief characteristic or some distinctive feature is taken as a basis, the task is comparatively easy; but beyond such general distinctions classification becomes somewhat involved. Several are used by financial writers, differing in detail yet built upon practically the same foundation. All are essentially correct. Indeed it is impossible to make an arrangement of bonds admitting of no variation.

The most general is to group them under one or the other of two heads, namely, Mortgage and Debenture bonds. Enlarging somewhat upon this they are grouped as Mortgage, Equipment, Land Grant, Collateral Trust, Prior Lien, Debenture and Income, which is about the

*Courtesy of Messrs. G. P. Putnam's Sons.

greatest number of general groups practicable; a finer division immediately emphasizes distinctions of individual issues. From a market point of view solely, bonds and funded investments are often put into three divisions, railway, industrial, and miscellaneous. From this same point of view, under miscellaneous bonds are included industrial issues and so making this division to consist of issues of foreign governments, public service corporations and industrial companies. The present classification proceeds differently by presenting the bonds arranged under corporate groups and then considering the individual issues.

Before discussing the bonds it is expedient to consider the issuing corporations, with a brief inquiry into their nature and classification. Though not prerequisite to an understanding of the subject such general knowledge contributes measurably toward a clear conception of the nature and functions of the various bonds. It is important to know in what division each corporation lies and in a general way what types of bonds it issues.

Of corporations there are three kinds: Public, Quasi-Public, and Private, their names indicating, in a measure, their functions. The public corporation, very generally called municipal, is a political division empowered by law to do such acts as are necessary for the well being and advancement of the commonwealth; its particular functions are many and it is conducted for no gain save the public good; its operations are limited to the territory over which it has jurisdiction and its officers are largely elected by its citizens. Municipal corporations are classified by law, generally according to population and assessed valuation, and their powers are defined according to class. Cities and counties are representative examples. The private corporation is exactly the opposite; it is formed for pecuniary gain and its activities may be universal; it gets its being and powers from the law, and, when not violating its provisions, is not amenable in any sense. In organiza-

tion and operation it is entirely different from the public corporation and is typified in a manufacturing company. Quasi-public corporations partake of the nature of both public and private, though in law they are considered as of the latter kind. Their services, nevertheless, are essentially public—hence, the classification. Formed primarily for private gain, they have rights that are strictly private and beyond legislative control, yet they may be subjected to considerable regulation by State and Federal authorities. The steam railroads and public service corporations fall in this category. Of those corporations other than public, there are many whose status is not yet clearly and finally defined, since authorities on the subject are divided. The best legal minds are far from unanimous on the identity of some corporations in so far as it is fixed by their functions. Whether these functions are private or quasi-public is a mooted question. With this as a safe basis, investment bonds may be classified first by two great general divisions, putting into one those issued by public corporations and into the other those issued by private and quasi-public corporations.

Municipal and State.

Considering these general divisions, in the first we find three classes under which may be grouped, however designated by name, all of such securities issued by public corporations. Every municipality is under the necessity of maintaining public works and making improvements, such as building of bridges, sewers, and waterworks to finance which it is generally necessary to issue bonds. Part of this funded debt is often known as corporate stock which is only those long-term bonds issued for permanent improvements in distinction to the assessment bonds issued to provide funds for all work done by contract, the expense of which is to be collected by assessment from property benefited by the work. Likewise every State has

similar duties; additional highways may be needed—a canal may be demanded by business conditions—the requirements for educational purposes may be enlarging, for all of which, after the proper legislative authorization, the funds are usually provided by an issue of bonds.

Federal Government.

The Federal Government, too, has many matters to look after. Its duties are all public, of course, but their scope is much broader. It must finance such projects as are authorized by proper legislation. Building a canal such as the Panama, for instance, would generally be financed by bond issue, as would the prosecution of a war. The general acceptation of the term "municipal" as applied to bonds, contemplates those minor civil divisions smaller than a state, although, strictly speaking, all public corporations are municipal.

Industrial, Railroad, Public Service.

In the second general division, private and quasi-public corporations, there are a greater number of classes. Every progressive manufacturing company has need for a new capital from time to time; growth of business means enlargement of plant or acquirement of other plants. To finance these operations, in part at least, bond issues are often made. Consolidation and extension of the great net work of steam railways throughout this country produces great amounts of bonds; the railways unceasingly increase their mileage and improve their facilities. Numerous traction lines, which operate largely in cities, also produce a considerable amount of bonds. The marvellous development of electric motive power has given a great stimulus to this form of enterprise, and much of the necessary capital is obtained through bond issue. Another source from which many bonds are put into the market are public service corporations. The rapid growth of the country

necessitates installation of public utilities everywhere, and accordingly new waterworks are built, new gas, electric, and power plants are constructed and telephone facilities extended. The call for funds in this direction is largely met by issue of this kind of security. Still other bonds, although comparatively few, are placed on the market—those issued by navigation lines whose needs are similar to those of other transportation companies in the way of new equipment, new and larger terminals, etc., and which are provided to some extent by bond issues.

Improvement, Equipment.

Considering issues individually, some are found to be the natural product of the growth of corporations. Any corporation may issue a type of improvement bond to finance specific or general permanent improvements and if there is definite security, a condition wholly dependent upon the kind of corporation, it generally takes the form of an encumbrance on the property benefited. The railroads are practically alone in issue of what are known as extension and construction bonds, both of which finance the building of new trackage, and are usually secured by a first mortgage on the property created; their issue is progressive with the work. Again railroads often buy up other railroad properties and sometimes need more land for terminals. An issue of purchase money bonds may be made, secured by a lien on the property obtained. This acquired property may have a debt, and where such is the case, the purchaser usually provides for it. However, this is not exclusively a railroad type although practically all of this name have come from that source. It is frequently necessary for a railroad to increase the number of its cars to care for growing business, and there may be no other available means of obtaining necessary funds save through an issue of "Car-Trust" or equipment bonds. Strictly speaking, a "Car-Trust" bond (or certificate, as it is sometimes known), is

an obligation issued by a concern known as a car trust. Its security is the cars, which have been purchased from a manufacturing company and rented to a railroad company until full payment is made, periodical payments being provided for, which go to make payments on the bonds. The equipment obligation differs in that it is not issued by a car trust and is somewhat broader in scope, including, as it may, locomotives, boats, etc. This distinction should be remembered for yet another reason, and that is, that equipment bonds are not necessarily railroad issues: a manufacturing company may, quite as well, put out such bonds to purchase machinery and equipment.

Founders, Mortgage, Refunding.

A bond rarely used in this country but quite well known abroad is termed founders. It is generally given to the promoters of an enterprise in the nature of a bonus in a similar manner that stock is given in this country. Technically, it may be considered more as stock than as a bond though it is often designated by the latter term. Accompanying the universal tendency toward corporate consolidation has come the necessity of bond issues adapted to this condition. To this end we have such securities as general mortgage bonds which may be issued by any corporation other than public and are generally secured by a lien on the property in its entirety. In scattered instances they constitute a first lien; but are generally subject to some prior liens. Akin to this are consolidated and "Blanket" mortgage bonds. The former usually puts a new security on an entire group of properties already fully covered individually and while therefore secured by a mortgage on all the properties, this lien too is generally subject to some of prior right. Scarcely any distinction is to be made between the so-called "Blanket" mortgage bond and the two others just mentioned. The term is generic in its significance and whenever used, which is

seldom, is little else than synonymous—it may aptly describe either of the others. In the issue of such comprehensive mortgages provision is almost invariably made for refunding other issues as they mature, these issues being much smaller and generally a prior lien and being provided for by an arrangement for their exchange for the proper amount of the larger issue. Very frequently, however, issues are made specifically designed for the purpose of refunding, which gives the name to a very large amount of bonds at present in the market. Any kind of corporation may issue these, which are essentially a continuation of a former debt beyond its maturity. When the maturing bond is not retired in exchange for a proportionate amount of the new issue, it is cancelled and payment made through sale of part of the issue. Refunding issues are generally as well secured as the bonds they retire. A few corporations, mostly railroads, have found it expedient to consolidate much of their funded debt, covering it by only one issue of bonds known as unified. In this way a simplification is accomplished by uniting under a single issue a mass of miscellaneous obligations. The advantages to be derived from this procedure are not a few. One is increased facility of management of the debt—another, the generally better market which the new security enjoys over those it displaces. The whole operation is indeed in most respects analogous to refunding. What differences exist are unimportant.

Lien.

The rehabilitation of many corporations, through rearrangement of their finances, before or after a critical point was reached, evolved a number of types peculiar to such conditions. Rehabilitation after this manner was in every instance a form of reorganization out of which came such bonds as reorganization lien. The characteristics of these issues grew out of the attending circumstances and they

were generally vested with only a junior lien on the property reorganized. But as reorganization of a company means settlement of the claims of the various interested parties on a satisfactory basis, there has been issued occasionally a form of bond in many respects similar to the last mentioned and called adjustment. Always an outgrowth of such conditions, its features have been determined accordingly. In this way additional capital for improvements has been realized, while a lien, only junior in its preferment, has been given. An excellent example of this type of security is the Atchison, Topeka & Santa Fê 4 per cent adjustment issue, growing out of reorganization of that road in 1896. The success of a reorganization plan is generally dependent upon the ability to secure additional funds. So to insure this, it has sometimes been necessary to give a preferential claim to those providing the funds. A prior lien bond has therefore been issued. Practically all such issues are railroad obligations secured by mortgage but are not always, as might naturally be supposed, the first obligation of the issuing company. The name is but a relative term and may mean no more than that the bond is prior to some other specified issue. As mortgages covering prior lien bonds are usually general in character, embracing much property, they are, like all such, subject to other liens. The distinction therefore, between *prior lien* bonds and those having a *prior lien* is to be marked. The Erie Railroad, among others, has a representative prior lien issue.

Income.

Insolvency and reorganization produce still another bond. At such times concessions are required of some security holders, and for the compensation of those making the sacrifice there is issued the income bond. With few exceptions, this has been its orgin; it is, however, fast disappearing from the lists. Briefly stated, it is an obligation

the interest on which is payable out of net earnings after all fixed charges have been met. Interest, therefore, is contingent, being entirely dependent upon the earnings of the company and still further uncertain, in that it is payable or not in the discretion of the mangement. Sometimes it is cumulative, standing as a charge ahead of all dividends on the stock. Generally such bonds are mortgage secured as to principal and are always a junior lien.

Assented Income.

The status of an income bond may be changed by agreement. Absorption of a small line of railway by a great system usually brings about a modification of the securities of the former; the larger company may wish to withdraw certain issues, for which privilege it makes attractive offers to the holders. In the case of the assented income bond a fixed and regular interest return is assured where formerly it was contingent. For this the company is given some privilege, say perhaps to retire them before maturity at a stipulated price. Concurrence of the bondholders in such an arrangement gives rise to the name.

Collateral Trust.

A type of bond which came into prominence and favor within the past few years but whose popularity is now waning, is that which depends for its safety entirely or almost entirely upon the pledge of other securities usually taken from the treasury of the issuing company or system and placed in trust, under the terms of the collateral mortgage, to secure payment of principal and interest. These securities may consist wholly or in part of stocks or bonds, and are generally the obligations of auxiliary companies. Up to about the year 1900, bonds were extentensively used as security and nearly all of first and second mortgage; subsequently, deposit of stock only became the general practice. Under variously named

issues, practically all of the railways and many other corporations report large collateral trust mortgages. Many such issues have found their source in the holding company, a corporation having no independent credit and usually operating no properties and whose assets consist largely of stocks and bonds of other companies. In fact, this, with but one other kind, the debenture, is the only bond obligation such a company can issue. A large number of companies are both holding and operating, when of course, they may issue any kind. Typical examples of a purely holding company were to be found in the Northern Securities Company and the United States Steel Corporation when it was first organized. At present, the United States Steel Corporation, Pennsylvania Railroad, and Union Pacific Railroad are excellent examples of companies both holding and operating.

Joint.

What may be a collateral trust obligation (though it may be any other) is the joint bond; as such it was exemplified in the Great Northern-Northern Pacific Joint 4's issued in 1901 and secured by deposit of Chicago, Burlington & Quincy Railroad stock. Taking this as representative, it is a security issued by two or more companies (usually two), each company being liable for its proportion of the bonds, both principal and interest. Provision is usually made that should either company default in its obligations, the company not defaulting shall become owner of the entire property and shall become liable in severalty upon all covenants contained in the bonds.

Participating.

Past success in the flotation of some large blocks of collateral trust bonds may be attributed to one or more special features embodied. An expedient that has been used is permission to share beyond the regular fixed rate of inter-

est in profits that might accrue under certain conditions. The arrangement as generally carried out allows participation to a specified proportion in any increased dividend that may be declared on the underlying stock collateral. A notable example was the Oregon Short Line R. R. 4's issued in 1902. Another bond that enjoys the possibility of larger return through increased income or profits on underlying collateral is that known as profit sharing. The form is very seldom used, the best-known issue being that of the London Underground Electric Railways. Its security lies in deposit of stock as a basis, which stock is deposited at a certain price, the provisions of the mortgage permitting its sale when the market assures a profit, the sale price of course being above that at which the stock was deposited as collateral. In the event of disposition of the stock prior to the due date of the bonds the holders share in the profits realized from such sale.

Convertible.

The convertible bond is the embodiment of another idea involving profit-sharing provisions. Very frequently a corporation cannot issue stock to advantage as a means of obtaining funds for its needs and is therefore restricted to some method entailing pledge of its property or credit. Prevailing conditions may hold out large promises of success for an issue of convertible bonds as the only type exactly filling the requirements of the situation. This privilege of conversion, the feature of this type, is incorporated in the mortgage and allows the holder to convert his security into some other form of obligation, usually stock, within a specified time and at a specified rate. What may become the source of profit is the possible high market price on the stock at the time the privilege is exercised. By then exchanging the bonds for stock and turning that into the market a substantial profit could be realized. A high quotation for the stock substantially indicates sound

business conditions and increased profits in which the convertible bondholder is thus privileged to share.

Sinking Fund Redeemable.

Most bonds run for a definite period of time; that is, they are intended to live out their allotted number of years. Among those otherwise designed are some subject to repurchase by the issuing corporation within a specified time or at a certain date. To accomplish this a certain amount of money is set aside—more often annually—to retire the bonds at that time. It is customary with many municipal and public service corporations and also with nearly all companies whose assets are gradually depleted by the operations of business to follow this plan, thus establishing what is known as a sinking fund. All bonds that may be retired in that way are so called. Sinking fund bonds of all but public corporations are generally protected by a mortgage, which contains, if the bond itself does not, the provisions relative to the operation. When bonds are subject to a sinking fund, or liable to be retired at the option of the maker, they are said to be redeemable.

Irredeemable, Perpetual, Annuity.

In contradistinction to those so affected are some whose life is practically interminable, sometimes referred to as perpetual bonds. Very seldom issued, they are an obligation whose retirement is not provided for by any specified date of maturity. Ordinarily this would necessitate purchase in the open market or refunding, should it be desirable to retire them. This is true, of course, so long as all proper conditions exist. Should default in interest occur, the principal, which is mortgage secured where not a public corporation obligation, becomes instantly due. The same principal is worked out in all essential particulars in the annuity bond whose chief characteristic is obviously perpetuity. Of this last type very few companies have any

outstanding, those most prominent being the Long Island Railroad and Lehigh Valley Railroad issues. As for irredeemable bonds as a class they are not numerous. Several of the states—Kentucky for one—have small amounts and about an equal number of railroad corporations have a few. Further examples may be found in British Consols and the Rentes of France and other foreign countries, though they differ fundamentally from American issues. In those countries no paper evidence of debt is issued for a mere record of the obligation is always considered sufficient.

Exempt, Non-exempt.

Under property classification, bonds become subject to the laws imposing taxation. But not all. Those released from such liability are thereby given a prominent and desirable feature and enjoying this privilege are called exempt. But the term "exempt" is used in another sense—to indicate immunity from call for sinking fund purposes. This fact is peculiar to a few issues at present in the market; a portion only is subject to retirement by such a fund and that part which may be so retired is specially designated as non-exempt. Again, there are bonds whose life might be uncertain and their value unstable were they to remain under the same conditions as issued. Indeed it may be imperative through reorganization or otherwise that the force of the obligation be lessened and its terms modified; or again, new or different privileges may be granted to the holders of an issue, or some mutual agreement may be made involving a change of conditions, such as the reduction of interest or the insertion of the call privilege. The record of such changed conditions is usually stamped upon the bond and thereby becomes a part of the instrument. Of course, any bond may be so treated and would then have this additional qualifier, *stamped*. This bond is seldom used.

Guaranteed, Endorsed.

One of the conditions frequently included in a bond contract is that of guarantee, where payment of either principal or interest or both is assured by the promise of another corporation. It accepts the liability, contingently, as the case may be, and consequently enhances in a greater or less degree the value of the obligation as an investment. These bonds are frequently spoken of as *endorsed,* inasmuch as the guarantee is quite generally given by endorsing the instrument to that effect.

Subsidy, Land Grant.

For the purpose of classification, the subsidy bond may justly be considered as a guaranteed obligation. Here, by pledging itself to pay the interest on bonds issued for construction purposes, a government assists in establishment and support of an enterprise deemed advantageous to the public. Or else, what amounts to a subsidy, it gives special rights, powers, and privileges, and perhaps the enjoyment of absolute or conditional immunity from taxation. Formerly municipalities and states subsidized largely, in one form or another, but it is no longer practicable, and indeed it is generally impossible for them to do so. Notwithstanding this, in one or two states municipal aid may yet be extended by legislative authority in exempting from taxation or by endorsing or issuing bonds in the case of gas works, water works, railroads, etc. Thirty years ago these practices were widely prevalent in the United States, principally in support and encouragement of railroad building. Foreign governments still employ this means of promoting undertakings. Subsidizing, however, does not always take the form of payment of interest or principal or the bestowal of prerogatives. Building of the great transcontinental lines of this country was made possible, at the time they were laid down, by substan-

tial gifts of public land from the Government. Bonds were issued to raise funds for construction, and the lands were pledged under a mortgage for their redemption. These lands were gradually sold and the proceeds applied to pay interest on these bonds and to form a sinking fund to retire them eventually. Most of these bonds have been withdrawn and as the public domain is not now large and the roads originally benefited are practically in a position to take care of their financial needs without governmental assistance, this type of obligation will soon be extinct. Thus it is that land grant bonds are distinctively railroad issues. Beyond these gifts of land the Federal Government rendered no material aid to roads except in very few instances.

Terminal.

Scarcely less distinctive as a railroad bond is that form of obligation secured by mortgage on terminal property and usually given by a terminal company. The stock of such a company is generally held by a road or association of roads having common terminal facilities and known as a terminal company. Provision for principal and interest is made by payments of rental by each company. This is the general practice although railway companies as such have issued terminal bonds, their interest becoming a proper charge on the revenues of the company.

Divisional.

The integral parts of nearly all great railroad systems bear separate mortgages which were placed upon them before their consolidation. These parts are designated as divisions, and the bonds issued for their account are secured by a lien on the respective part only. The obligation, however, is that of the parent company, the term merely indicating that the security given is some specific division of the property.

1-2-3-4-5 Mortgage, Debenture.

Extremes meet when we consider the purely first mortgage bond and the debenture, the characteristic of the former being its absolute priority of lien. A bond that may rightfully be called first mortgage is, in fact, not subject to any other liens, its security being a mortgage to which all others are subsquent. Strictly speaking, any such bonds should be protected by a mortgage senior in position on all the property denominated, yet in practice the underlying mortgage has sometimes been made first on only a portion of the property. There have been also second, third, fourth, and fifth mortgage bonds, all, of course, respectively junior in their lien, but they have passed out of favor to an extent that any beyond second are practically unknown now. Complete absence of representative physical security in so far as a mortgage is concerned is the dominant characteristic of the debenture bond. In reality it differs little from a promissory note being generally a simple promise to pay. In effect it is a very formal note. It is generally a last claim on the properties of the issuing company and is inferior to all other of its bonds. Obviously none but corporations of a high character and whose status is well defined can successfully issue this type. The term "debenture" means debt. Under this broad interpretation other obligations are sometimes so called. Principal among these are some bonds issued by municipalities in Canada. The debenture is an idea characteristically English and one that may be said to have been borrowed by some of the larger and stronger corporations of this country. A few railroad corporations have outstanding what are known as "plain" bonds which are nothing more or less than debentures having likewise no mortgage security.

From the foregoing, a relationship, more or less near, between the character of a bond and its name, is evi-

dent. With some it is very close, the name indicating clearly the nature of the obligation; with others, but vaguely explanatory, conveying only a meager idea of its nature. At best a name is no more than a descriptive term or combination of terms qualifying each other, any one of which may represent the chief feature of a bond. With accumulating issues on a property it is often difficult to name suitably a new one so as to make it fully expressive; hence the necessity of long, often confusing and sometimes apparently conflicting, combinations. The name, however, is not always the result of circumstances of this nature. It would not be without precedent should sinister motives actuate a company in describing a proposed bond issue. Certain terms of course are technically admissible in names; yet this has sometimes been presumed upon to an extent actually misleading. While some names are indeed adequately descriptive, mere titles, often signifying only part, mean little from the viewpoint of investment. Every issue must be studied carefully and examined on its own merits.

In the title of almost every bond one term at least is an index of its nature. For example, names like assessment, tax relief, and the like, instantly indicate municipal issues; we know at a glance the class of the issuing corporation. The relative position of a bond issue is a matter of vital importance. To some extent this is shown in names. Again, the specific purpose of issue is many times embodied in the name; special features and unusual privileges are betokened and nearly always there is evidence of the presence and nature or the absence of security.

The subjoined classification, number two, proceeding along this line shows in a general way the bonds whose names indicate their function, security or its absence, security and function, maturity conditions and conditions existing during life. The other tabular form follows the text early in this article, beginning with the great classes

of corporations, considering the various kinds of corporations in each class and the different types of bonds issued by each. Both these classifications admit of many variations, but in the main they present the numerous issues corresponding closely to common practice. Having considered the component terms of names, it is interesting to note the variety of combinations wrought out:

First Lien and Collateral Trust.
First Mortgage and Collateral Trust.
First Consolidated Mortgage.
First Lien and Consolidated.
First Refunding Mortgage.
First and Refunding.
First Extension Mortgage.
First and Collateral.
First Lien and Convertible.
First Lien and Refunding.
First General Mortgage.
First Mortgage Extension.
General First Mortgage.
General Refunding Mortgage.
General Lien Railway and Land Grant.
General Second Mortgage.
General Third Mortgage.
General Lien Divisional First Mortgage.
General and Refunding Mortgage.
General Consolidated and First Mortgage.
Railroad and Land Grant General First Mortgage.
Prior Lien Railway and Land Grant.
Refunding and Extension.
Collateral Trust and First Lien.
Consolidated First and Collateral Trust.
Refunding and Improvement.
Consolidated First and Extension.

No. 1.

PUBLIC	Municipal State Federal Gov't.	Refunding Sinking Fund Improvement, etc.
QUASI-PUBLIC	Railroad Public Service Traction	Purchase Money Refunding Improvement Extension Construction Adjustment Unified Reorganization Lien Consolidated Mortgage 1st. 2nd, 3rd, Mortgage General Mortgage Divisional Collateral Trust Debenture Sinking Fund Income Terminal Land Grant Real Estate Prior Lien Joint Car Trust Irredeemable Assented Income Annuity Convertible Participating Profit Sharing
PRIVATE	Industrial and Others	Debenture Construction Consolidated Mortgage 1st Mortgage General Mortgage Collateral Trust Income Equipment Sinking Fund Convertible Founders Real Estate

No. 2.

FUNCTION	Purchase Money Refunding Improvement Extension Construction Adjustment Unified Reorganization Lien Consolidated Mortgage Subsidy
SECURITY (as to principal or interest or both)	1st Mortgage 2nd Mortgage 3rd Mortgage General Mortgage Divisional Guaranteed or Endorsed Collateral Trust Debenture Income Terminal Land Grant Real Estate Prior Lien Joint
SECURITY AND FUNCTION	Car Trust Equipment
MATURITY CONDITIONS	Redeemable Irredeemable Profit Sharing Non-Exempt Assented Income Annuity
CONDITIONS DURING LIFE	Convertible Stamped Exempt Participating

GROWING POPULARITY OF PUBLIC SERVICE CORPORATION BONDS AS INVESTMENT.

BY THOMAS W. SIMMONS.

[Of Bertron, Griscom & Jenks.]

Students of investment securities have for some years been interested observers of the growing popularity of public service corporation bonds as investments. The increasing favor of such securities has not been confined to any one class of buyers. The result has not been attained suddenly. Some prejudice had to be overcome, and the advance has been contested step by step by opposing interests. Only because they merited confidence has the faith of investors been secured. Proof of the present popularity of public service corporation bonds is found in statistics recently compiled by the Comptroller of the Currency of the United States Treasury Department. The report covers investments held by all reporting banking institutions of the United States, embracing national, state, savings, private banks and trust companies. A comparison of the figures of June 30, 1910, with those of the same date in 1909 shows that during said year these institutions reduced their holdings of municipal bonds by $46,739,788, and their holdings of railroad bonds by $106,060,520, while increasing their investments in public service corporation bonds by $23,017,667. Thus it is shown that the latter class has not only won its way to popular favor, but has received very strong recognition at the hands of discriminating officials of banking institutions, who are qualified to pass intelligent judgment upon the merits of investments.

In the light of these facts, the present popularity of public service corporation bonds as investments must be acknowledged. That this popularity will continue, no well-

informed student of investment securities doubts. Carefully selected public service corporation bonds contain all the elements of safe and desirable investments. That all such issues cannot be safely bought goes without saying, but the percentage of good bonds has largely increased during recent years, until now, with the exercise of ordinary prudence, they may be safely bought by all classes of institutional and private investors, with the exception, only, of savings banks and trustees, who are limited to that particular class of securities prescribed by the statute laws of their respective States. Even these restrictions are being removed, and many States now permit savings banks and trustees to invest in the best public utility bonds. It is confidently predicted that the number will be materially increased as these securities continue to pass successfully the test of time and as their merits shall become better understood.

As it is well known that public utility bonds have not always been favorably regarded by careful investors, it is interesting to know what has brought about the change. This may be clearly understood in the light of the history of such securities.

Like all innovations and improvements, public service corporations have had their periods of growth and experiment. Only a few years since, the horse car and the coal-oil lamp were in general use. From these to the rapid and convenient service of the present day has been a long step, but it has covered only a few years. That which was at first an experiment is now a necessity of modern life. Experiments are usually attended by mistakes; and the origin and growth of electric railway, gas and electric light companies constitute no exception to the rule.

Until the advantages of the service furnished by these corporations were fully understood, and while both construction and operation were in their experimental stage, it was natural that the former should not have been of a permanent

character and that the latter should have been unskillful. The great impetus that the service of these corporations has given to general business and to suburban development was then undreamed of. The machinery used by such companies was imperfect, and expert management was unknown. Properties were almost without exception constructed and operated under the supervision of local men, of bankers, lawyers, merchants and manufacturers. These men possessed neither technical nor practical knowledge of the business, and their mistakes were many and costly. Statistics were lacking which would have enabled capable engineers to have foretold the success or failure of contemplated electric railway, gas or electric lighting systems. Because confidence was lacking, financing was difficult and expensive, and too frequently the proceeds of securities sold were either through ignorance or actual dishonesty misapplied. Vast amounts which should have been judiciously expended for construction and equipment were annually put into the pockets of promoters or paid to politicians for privileges or protection. Only recently has it become fully understood that in the management of these large corporations honesty is the best policy, and that a public, satisfied by good service at reasonable cost, constitutes the best safeguard against unfair competition or prejudiced attack. Even the laws governing these companies were for many years either inadequate or unfair, and there was lacking those legal precedents which are so necessary to both the investor's confidence and protection. As the discovery of gold in a new country always attracts a large class of the lawless and unscrupulous, so this new field of finance was quickly invaded by many inexperienced and by some dishonest manipulators, whose only desire was to manufacture securities, sell them to the public, and then quickly retire with the spoils. Had these conditions continued, public service corporation bonds would never have attained popularity among investors.

It is only necessary to compare public utility companies of today with those of even the recent past in order to fully understand the change that has taken place. If a simile may be permitted for the purpose of illustration, it may be said that formerly these corporations represented the inexperience and immaturity of youth, while those of today are the child grown in experience, knowledge and strength to the full stature of a man.

Today every properly equipped bond house maintains numerous departments, the sole business of which is to investigate conditions, examine properties, and supervise the issuance of securities. Experts are employed in all branches of this work, and every phase of the situation is covered. The locality in which the public service corporation under consideration is operating, or in which it is contemplated it will operate, is fully investigated. The size, density and character of population is taken into account; the permanency and probable growth of the community; the character of its industries and whether or not these are diversified, or whether they are principally of one kind and therefore subject to periodical depressions of a serious character, are all regarded as matters of great importance. Then, too, political conditions are looked into for the purpose of determining the likelihood of fair or prejudicial legislation. These questions vitally affect franchise rights, upon the maintenance of which the success of every public service corporation depends. The attitude of some city governments and even of some state governments is still so antagonistic to utility companies that careful bankers are unwilling to risk their money or that of their clients in securities that may be jeopardized by the attacks of politicians who are willing even to destroy values in order to feed a popular prejudice which, in the main, they originally created.

Without discussing the question of the wisdom of municipal ownership in some cases, it is apparent that many agitations which have, at least temporarily, unsettled values,

have been based upon nothing more reasonable than the desire of one political party or faction to obtain success at the polls. In almost all cases in this country, municipal ownership, when tried, has proved anything but profitable, and in almost every case, too, in which this has been true, the result could have been foreseen from the beginning by any reasonably well-informed person, if the question had been considered solely from a business standpoint and with a mind free from bias and uninfluenced by popular clamor.

Not only does the far-sighted investment banker look carefully into political conditions before investing his money in communities in which there is a popular prejudice against public service corporations, but he even hesitates to invest in States in which the courts of last resort have not by their decisions established precedents which mark out a safe course for him to follow.

The question of locality having been favorably passed upon, the investigation is next directed to the property itself. Such an examination requires the skill of experts in both construction and operation. The best talent obtainable is employed for this work. Such men do not simply report upon present values, but they foretell with surprising accuracy what the future success of a property will be. They can estimate future earnings and future expenditures with remarkable certainty, and thus furnish statistics which can be safely taken as a basis for present and future financing. Thus a banking house, before purchasing investment bonds offered for sale, not only knows the value of the property which at the time constitutes the security behind the bonds, but it also knows what the future financial requirements of the company will be, and whether or not future earnings will justify the same.

Formerly while public utility companies and the machinery used by them were hardly more than experiments, construction was cheaply done. Today machinery of known efficiency is used and construction is of the most permanent

and expensive character. Cheap things are seldom economical and they are never so in the matter under discussion. Therefore bonds issued today by public utility companies constitute a lien on exceedingly valuable physical property, the working life of which is known before the careful banker invests his money in them.

The matter of present and prospective earnings is also an important one. While no definite rule can be laid down as applicable to all cases, careful banking houses require that net earnings shall largely exceed all bond interest, the usual requirement being that they shall amount to from one and one-half times to twice said interest. With present earnings equalling said amounts, with estimated future earnings maintaining the same proportion of safety, and with the issuance of treasury bonds carefully restricted by mortgage provisions, not only are present values established but adequate future values are insured also. Not only do investment bankers of the best standing today insist upon all these requirements but they go much further to protect their own interests and those of their customers. They employ the best legal talent obtainable to examine into the legality of franchises, to pass upon titles to property, to prepare mortgages and contracts, to attend to all the legal requirements of the organization and operation of public service corporations and the issuance of their securities. Resolutions passed by directors, the minutes of their meetings and the voting of stockholders are supervised by lawyers of high standing in the field of corporation law. The banker also insists that mortgages and contracts shall contain provisions which the companies frequently consent to reluctantly, but which are insisted upon because experience has taught that they are necessary to insure the future safety of the bonds he is to offer for sale. One of the most common of these requirements is that restricting the future issuance of treasury bonds. Not only must present earnings justify the initial issue but the bankers require that further

bonds shall not be issued unless the present ratio of net earnings to bond interest shall be maintained. Another provision of importance is that which permits the issuance of treasury bonds only to the extent of a certain percentage of the cost of future extensions, improvements or acquisitions of property. This usually ranges from 60 to 85 per cent. Such restrictions, while permitting bonds to be issued in the interest of increasing business, put a check upon management which if unchecked might be prejudicial to the interests of security holders.

While the foregoing describes many safeguards now thrown around carefully issued public service corporation bonds and is sufficient to show the marked contrast between present-day issues and those of former times, the precautions recited by no means constitute all the safeguards at present employed. A potent factor in the organization and management of public service corporations in many states today is the public service commission. These commissions, when clothed with proper legal authority, are at once both the corporation's and the security holder's guardian and best friend. On one hand they protect the corporation against ruinous competition, and on the other insure the investor against the issuance of securities which do not represent reasonable values. These commissions not only limit the amount of capitalization but they go further and prescribe the purposes for which the proceeds of bonds shall be expended. They also frequently require the establishment of amortization funds which insure the proper maintenance of properties.

While such commissions sometimes incur the strong opposition of companies under their control by limiting charges for electric railway transportation and for gas and electric light service, they often prove to be the corporation's best friend by this very regulation, for such service generally insures a satisfied public which in turn often constitutes the company's most valuable asset. Another benefit to

the corporation which has attended regulation of capitalization, is the increased confidence it gives the investor. This not only enables the corporation to finance its needs more easily, but as the commission prescribes the minimum price at which the company may sell its bonds, it frequently results in enabling it to obtain a higher price than would otherwise be the case. For a long time there was a deep-seated antagonism on the part of public utility companies to the interference of public service commissions. This antagonism is fast disappearing and so salutary have many of the commission's requirements proved to be that some large holding companies which own and operate properties in states which have no such commissions, have adopted many of the rules relative to amortization and other matters which have been prescribed by commissions in other states.

The foregoing deals only with public utility companies, but as the bonds of such corporations are offered to the investor in competition with railroad and industrial issues, it is pertinent to this article to compare the respective desirability of these classes of investments. However, industrial propositions are so directly affected by business depressions, or the reverse, as well as by the dangers of competition, and they have so little in common with the other two classes, that their merits as investment securities must usually be considered either from the standpoint of very large income yield or the opportunities they sometimes afford for profits through wide market fluctuations. Therefore they may properly be omitted from this comparison. It is however freely admitted that some industrial issues do constitute satisfactory investments. The other two classes have much in common and may properly be compared. The scope of this article will not permit more than a passing word in this connection, and we shall therefore be content to call attention to but a few of the arguments most frequently advanced in favor of public service corporation bonds over those of the railroad class. Some of these are the following:

(a) It is practically impossible today to obtain first mortgage railroad bonds on large systems at prices that yield a satisfactory income to individual investors, while first mortgage bonds issued by representative public service corporations are still obtainable on from a 4.90 to a 5½ per cent basis.

(b) Such junior lien, refunding or consolidated mortgage railroad bonds as are at present obtainable on a satisfactory income basis, are either secured by a mortgage on some segregated part of a large system, or else they are so completely dominated by prior liens, that in case of foreclosure the holders would be completely at the mercy of larger or preferred interests. In contrast with this, public service corporations are usually in such great demand and they so commonly come within the power of competing bankers to finance that the holders of the bonds of such companies enjoy a protection that is impossible to the holders of railroad bonds of the class last mentioned. The public service corporation bond is generally secured by a mortgage lien on a valuable segregated property for which there would be many competitive bidders in the event of foreclosure, while the railroad issues referred to are in most cases a lien on only a part of a great system, the chief value of which is to the system to which it belongs, and for which, in case of foreclosure, there would probably be no competitive bidding.

(c) Railroads are mainly dependent for tonnage either upon manufacturing enterprises, such as the large steel interests, etc., or upon crops, and therefore during periods of industrial depression or in the event of serious crop failure their earnings fall off tremendously. On the other hand public service corporations furnishing gas, electric railway or electric light service have shown surprising stability in earnings, even during financial panics and prolonged periods of industrial inactivity. Experience has shown that people use almost as much gas and electricity for lighting purposes and ride on street cars almost as much

in bad times as in good times. Many public utility companies actually showed increased earnings during the panic of 1907 and the dull business year of 1908, while a very large percentage maintained their former rate of earnings during said time.

(d) In periods of disturbed condition in the stock market active listed railroad bonds often fluctuate widely in price for reasons entirely independent of those which affect the security behind the bonds. Such issues are frequently carried in margin accounts and as prices fall margins are wiped out and bonds are forced for sale with a consequential further drop in quotations. The same is not true of the great majority of public service corporation issues. These are seldom listed on stock exchanges, are infrequently bought for speculative purposes and they are therefore not often carried on margin. Quotations on such issues are generally not the subject of violent fluctuations. While a general market disturbance will undoubtedly affect their quotations to some extent, some interesting statistics have been compiled which tend to show that the decline which such issues experience in a falling stock market averages only about one-third of that experienced by active listed railroad bonds.

The investor who has read the foregoing will naturally ask the question, "If so much care is necessary in determining the safety of public service corporation bonds, how may they be safely bought by those who have funds seeking investment?" A complete and satisfactory answer to this question and one that will cover all cases cannot be given, but there are a few rules, which, if followed, all except minimum business risks will be eliminated and more than this the average investor does not require. When more is necessary investments should be sought only among Government, municipal or underlying first mortgage issues which yield only from about 2 to 4 per cent. The few important rules referred to are as follows:

1st. Never buy bonds on a purely construction proposition. Such issues sometimes turn out satisfactorily but the percentage of such cases is so small that it does not affect the general application of the rule. Construction propositions necessarily include many uncertain elements; original estimates of cost are frequently exceeded, unlooked for delays in completion are generally encountered, time is always necessary to demonstrate the earning power of even good properties, and in the meantime financial burdens incident to all these things must be carried by the banking interests which are backing the proposition. Such ventures are inconsistent with the elements of stability and safety necessary to strictly investment securities. Such undertakings are in the very nature of things speculative and while the final outcome is often profitable the average investor cannot afford to take the risk, and perhaps those who can had better not subject themselves to the worry, anxiety and delay which attend the average construction proposition.

2nd. Select only bonds on large properties which operate in established and thickly populated communities. These are free from many hazards incidental to small properties. The latter may be seriously affected by accidents or by even one negligent act which may result in a verdict for heavy damages on account of death or injury which may result. Then too small companies do not often enjoy the possibility of large increases in earnings which attend the rapid growth of population in large communities. Another advantage in large issues is the broader market which is created for them, making them more readily saleable and therefore more desirable to those who seek an investment which may be quickly converted into cash whenever occasion requires.

3rd. A very important rule to follow is to avoid the securities of companies which operate in what is commonly called a "one industry community." Such companies frequently enjoy long periods of prosperity only to see earnings

suddenly decrease enormously on account of a cessation of activity in the particular industry upon which the entire prosperity of the community depends.

4th. Statements of actual earnings should be required and these should be carefully scrutinized to ascertain the relation of operating expenses to gross income, while net earnings should be carefully considered in comparison with fixed charges. Usually net earnings ranging from 50 per cent to 100 per cent in excess of total bond interest should be insisted on, and of course interest on general bills payable must be regarded if the bills payable account be large.

5th. There yet remains the most important rule of all. If this be invariably followed all other rules may be ignored.

Deal Only with Reliable Bankers.

Investment bond houses of the best type have for so long been telling investors that their best safeguard lies in dealing with a properly equipped house of the highest standing, that many are now acting on this advice, realizing that it is not either feasible or possible for even the most experienced and best informed investor to properly pass upon the merits of securities. It is certain, however, that very few, even of those who follow this advice, fully realize how wise and necessary such a course really is.

FORECASTING TRADE CONDITIONS BY THE AREA THEORY.

BY ROGER W. BABSON.

[Author of "Standard Business Barometers," etc.]

History of Plots and Charts.

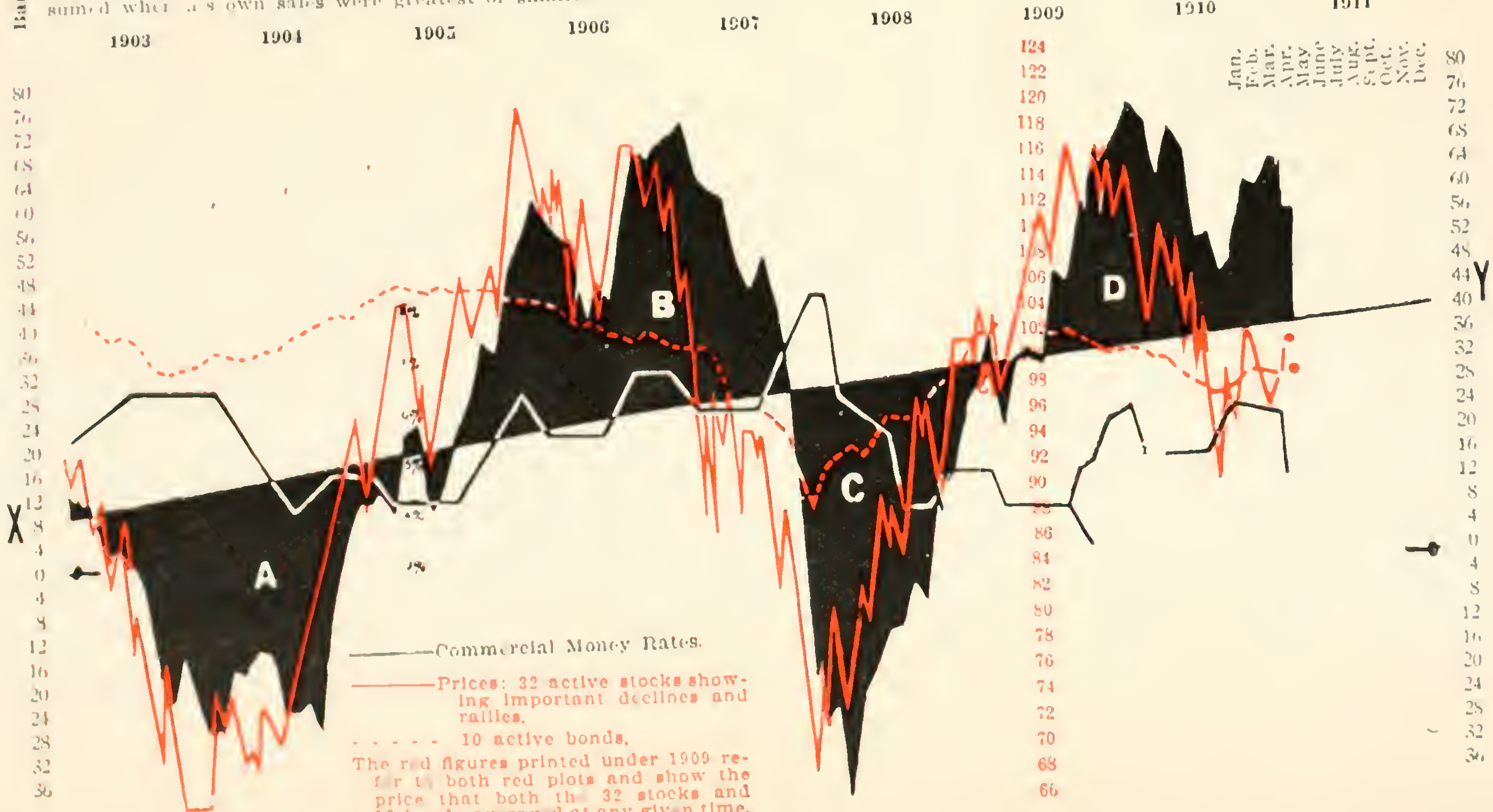
From time immemorial men have been making plots with the idea of forecasting trade, meteorological, astronomical and other conditions. The earliest plots of which we find record are those prepared by the Egyptians, remnants of which exist on monuments and stone tablets. We find that the rise and fall of the Nile River was charted by the statistical department of the Pharaohs for the purpose of forecasting future changes in the height of the river.

The Greeks also devoted considerable attention to the study of charts and plots, although their work was more along astronomical lines. They charted the heavens and worked out very interesting and intricate charts whereby they thought they could forecast future storms and other events. The Romans also studied charts with the idea of forecasting trade conditions, and in a work which I am now reading on the conditions of Roman trade at the time of Julius Caesar, some very interesting data are given, while the records of Genoa and Venice show clearly the attempts which their merchants made along these lines.

As is well known, Columbus and his contemporaries, Sir Walter Scott and his contemporaries, and others, made studies similar to much being done today; but space will not permit us to go into further detail concerning the historical end of this work. Sufficient it is to say that all of these charts were based simply on one dimension. As the old philosophers believed the world was flat and missed the other factor in their geographical studies, so they all seemed

COMPOSITE PLOT OF THE SUMMARY

Note: The large black areas are formed by combining and plotting the published figures for the past nine years on New Building, Crops, Clearings, Iron Production, Money, Failures, Idle Cars, etc., in order to give a Composite Plot of actual business conditions in the United States. The line XY represents the normal growth of the country's business the slope being changed whenever there is a change in the trend of conditions as shown by clearings. Based on the economic theory that "action and reaction are equal" when the two factors of time and intensity are multiplied to form an area, the sums of the areas above and below said line of normal growth XY must, over a sufficiently long period of time, be equal provided the line XY is properly located and enough subjects are herewith included with all properly weighted and combined. Moreover, owing to the law of averages and certain psychological laws, these separate areas tend to be equal in area, although not necessarily in shape. Thus before there is another panic or depression (which will cause another area to be formed below the line XY) the area D will expand to approximately the size of the average of areas "A," "B" and "C." It, however, should be remembered that this next area (which will be called "E") may be of an entirely different shape from anything heretofore witnessed and still contain a similar area, according to whether there is to be a panic or simply a gradual liquidation. Knowing that the areas tend to be equal, one can always estimate the length of any period by watching each week its height or "rate of flow," which shows how rapidly it is being consumed. The red solid line represents the average price of active stocks, the red dotted line the average price of active bonds, and the solid black line represents the average interest rate for commercial paper. A study of these lines shows that the high point of the stock market has come when the prosperity area is about one-fifth to one-quarter consumed and the low point has come when the depression area is about one-fifth to one-quarter consumed; that the lowest money rates and the highest bond prices have come at the very beginning of a prosperity area and the highest money rates and the lowest bond prices at the beginning of a depression area. To use this Composite Plot in connection with one's own business the observer should plot his own sales thereon and note what portion of the respective areas has been consumed when his own sales were greatest or smallest.



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to miss the importance of considering the second dimension in their studies of charts. In other words, up to within the past decade, all charts of business and trade conditions have been based either on the record of *time* or the record of *intensity,* and have been what are known as *single line charts.*

One Vital Error of Past Work.

For instance, when the Egyptians charted the flow of the river Nile, they considered simply the height of the water and not the force at which it was flowing. In the same way, when economists have charted the prices of commodities, they have simply considered the height reached by these prices without considering the period of time during which these prices have remained high or low. If, for instance, the normal price of wheat is $1.00 a bushel and the previous high point was $1.50 a bushel, they have considered the price of $1.25 as only a medium high price, believing that the next upward movement would approximately reach and perhaps exceed $1.50 before the market turned. In short, they have failed to recognize that it consumed as much "energy," so to speak, to keep the price at $1.25 for a year or more as it would to keep it at $1.50 for a few months. Therefore, the vital point to remember about the Area Theory is, that when prices, clearings, failures, earnings, etc., remain at medium high figures for a long period of time, it is equivalent to their being at a much higher figure for a short period of time.

The Same Error Prevailed Throughout All Scientific Study.

Not only did the old philosophers and economists make this mistake of considering one dimension in their study of trade and finance, but also made the same error in their study of mechanics, chemistry, medicine, astronomy and all of the sciences. Comparatively speaking it was only a short time ago that engineers began to base their work on

the foot-pounds consumed, instead of the one factor of space or weight. When our universities were first founded, a force was not considered the *product* of *two* factors. It was not thought that it required the same energy to move one pound through 100 feet of space as to move 100 pounds through one foot of space. The law of "action and reaction being equal when the total force involved is considered" was not recognized by the scientists until some time after Newton died. We who graduated from leading universities within the past few years are accustomed to think that the law of action and reaction has always been taught in connection with scientific studies; but such is not the case.

The Area Theory Is not New Except as Applied to Trade and Finance.

Therefore, the adaptation of this great law to economics and psychology is not a new departure, but simply a part of an evolution which has been going on in all the other sciences during the past 200 years, and has only recently reached its present state of perfection. Therefore, the first point which I wish to impress upon you is that practically all previous chart work has been based on only one dimension, namely, either time or intensity, *and not upon their product;* and secondly, I wish to impress upon you that the present-day work, in which I am so greatly interested, is not based upon one dimension but upon the *product* of two dimensions. This simply brings economics and psychological investigations up to the same point to which chemistry, mechanics, astronomy and the other sciences have progressed.

Description of Composite Plot.

So much for the theory involved, and now a word concerning the concrete case which we are discussing here, namely, that of forecasting trade conditions by the Composite Plot of business conditions. (See page 344.) This

plot is a bird's-eye view of business conditions in the United States from January 1, 1903, up to the present time, a period of over seven years. In our compiling offices, we have, of course, this plot going back much farther and worked out on various different lines; but the plot placed before you covering the past seven years is sufficient for explanatory purposes. The outline of this area shows the fall and rise in business conditions during these seven years, and how this chart is made up I will explain later. What I now wish to emphasize is that the theory of this plot is based on the great law of action and reaction about which I have spoken. This plot you will see consists of four areas, and we will call them A, B, C, and D. It will be seen that each area consists of two dimensions, the horizontal width which represents *time,* and the depth or height which represents the *intensity* of the period of depression or the period of prosperity, according to whether the area is below or above the slanting line of growth.

No Reason for the Areas Being of Similar Shape.

Now the old idea was that the periods of depression and prosperity must come with some regularity; that is, that we must have a period of depression every so many years. After the days of Joseph, the Egyptians thought that this must come every seven years, while certain financial writers nowadays think it must come either every ten or twenty years; but no definite regularity can be counted upon, as it all depends upon the *intensity* of the period. If the depression is very severe, conditions will mend very quickly and it will be of short duration; or if the period of prosperity is reckless and extraordinary, it can last only a relatively short time. On the other hand, if the depression is slight, it will take some years to readjust conditions; and in the same way, if the period of prosperity is moderate, it will last a longer number of years. Therefore, the position taken by many financial writers that history will repeat

itself, and, as panics have come with certain regularity at times past, said regularity will continue in the future, *has absolutely no economic basis.* In the same way, those who believe that prices must reach a certain height before they turn to go downward, or must reach a certain low point before they can turn to go upward, are absolutely wrong in their assumptions. Everything depends on the product of the two factors and *not* upon either factor independently.

What the Areas Show.

Therefore, to apply this theory to the plot before us, we see that the only feature worthy of study is not the length, or breadth, or height or depth of these four areas, but rather the product of their lengths and breadths, namely, their area in square inches. It is the *area* which represents business conditions: area A represents the depression of 1903 and 1904; area B, the period of prosperity of 1905 and 1906; area C, the depression of 1907 and 1908; and area D, the present period of prosperity which our great West is now enjoying. Granting, however, that these areas show the business conditions of the country during the past few years, you now ask how these areas can be used for forecasting trade conditions, and I can very briefly and plainly answer this point.

The Areas Should Theoretically be Equal.

Granting that the black line represents the normal line of growth of the country, and the outline of the black areas the condition of trade, then these areas must be absolutely equal. For if this country were willing to grow normally, we should have no periods of reckless prosperity or periods of depression; but for all that we go above this normal line of growth, we must rest a corresponding amount below it, although—and this is the important point to remember—we take our rest in areas and not in depth. In other words, a very shallow area extending over a long number of years

is equivalent to a very deep area extending over one or two years. I will repeat this important point; namely, that if the black line represents the line of growth and the area of the black plots represents the condition of trade, then these areas must be absolutely equal, from the law that action and reaction are equal when the total force is considered. Of course, it is impossible with the present data which the Government supplies to get this line of growth correct. Moreover the black areas are made up of only a comparatively few subjects, when they should doubtless contain many more. Therefore in practice these areas will not be equal; but they should be near enough equal for practical purposes in forecasting trade conditions. So much for the first statement.

How to Forecast the Future by the Area Theory.

Now, granting that these areas must be equal, it will be seen that the present period of prosperity is about two-thirds consumed, and that one-third remains. Therefore, to forecast trade conditions, it is simply necessary to ascertain how long we shall be in consuming this remaining third. The plot shows at a glance that a period of readjustment is ahead and that the next great movement must be below the line of growth; but we wish to know more than that; namely, how long it will be before we enter this depression? This depends upon the "rate of flow," so to speak; if conditions will moderate, we may be two or three years consuming this remaining third of the period. On the other hand, if the throttle is opened wide and conditions are pushed and business is forced, we may use it up in a comparatively few months.

Therefore, to return to the subject of forecasting trade conditions, it will be seen at a glance that, based on the area theory, we are facing a period of readjustment or depression to be worked out below the line of growth, and that this depression will probably come sometime within

the next few years, depending on the rate of flow which can only be told by watching this plot each week. If each week it increases in height, we may be sure that the period of depression is rapidly approaching. On the other hand, if it decreases in height and business flattens out and keeps only a little above the line of growth, it is safe to assume that present trade conditions will last for two or three years more.

Subjects Upon Which the Composite Plot Is Based.

These Composite Plots may be made in various ways and based on figures of almost an unlimited number of subjects; but after talks with leading economists and psychologists throughout the world, our work is confined to the subjects under the following twelve headings:

Mercantile Conditions.

Immigration.
Bank Clearings.
Failures.
New Building.

Monetary Conditions.

Domestic Money Rates.
Surplus Reserves.
Foreign Money Rates.
Commodity Prices.

Investment Conditions.

Stock Market Conditions.
Condition of Leading Crops.
Political Conditions.
Railroad Earnings.

Had I space, I would take up each of these twelve subjects in detail, showing the figures by *months* for ten years, and the figures by *years* back to the Civil War, with each subject illustrated by a distinct and separate chart.

Individual Charts Are Also Useful.

Such individual charts also show graphically the trend of conditions and the relation of trade today with similar periods during previous cycles. Although these individual charts cannot be depended upon of themselves, they are distinctly helpful in checking the Composite Plot. If the Composite Plot increases in height, it is well to note the individual plots and ascertain to what this is due. Not only are some subjects of more importance than others, but certain subjects may be especially affected by specific conditions which are more accidental than fundamental. Moreover the individual charts are of great value in studying certain subjects, as, for instance, banking conditions. Thus, in addition to studying the Composite Plot, which enables one to forecast the broad monetary conditions, one ought to give special attention to the following separate charts:

Relation of Loans to Deposits,

Relation of Loans to Aggregate Resources,

Relation of Reserves to Deposits,

together with several other charts which I might mention, such as Failures, Clearings, etc.

An Illustration Showing the Use of a Chart on Bank Clearings.

Few bank men understand the true significance of the chart on Bank Clearings. For instance, go back tomorrow and ask an officer of your bank what the chart of Bank Clearings shows, and he will tell you that it shows only the activity of general trade. This is true; but it does not give a hint of the dangerous feature of large Bank Clearings. If increased Bank Clearings simply show increased trade, the larger the clearings the better, and a constant growth would be distinctly favorable. Large Bank Clearings, however, show something much more vital. They show the rapidity with which money is being circulated.

They show the extent to which our currency is inflated, as a dollar passing through six hands in one week answers the same purpose as do six dollars passing through one hand during the week. In other words, our currency is not only inflated by the use of paper money and credit in its various diversified forms, but is being inflated by our huge bank clearing system. Some day this clearing system will receive a jar which will bring a financial and monetary panic on this country which has not been seen since 1837. Money circulated in this way at such a rapid rate as shown by the chart on Bank Clearings, when retarded, will receive a shock which will have the same effect as suddenly destroying a large proportion of our actual currency. Space, however, will not permit us to study the charts independently and therefore I am simply describing our Composite Plot, so-called, which is a combination of these various figures and charts into one chart.

General Description of the Composite Plot.

This Composite Plot may be made in two ways. We could first make individual plots, and then take a composite photograph of them all; but in practice there is a much simpler way. This simpler way is to take the latest figures on all of these subjects, and, by barometer scales, combine and reduce all these figures to one common index number, on the same principle as used by the London Economist for combining and reducing the prices of a large number of commodities to one index number. This index number we then plot, taking January, 1903, as "0." Of course, theoretically there is no reason why we should call conditions existing at that time as "0" any more than "plus 25" or "minus 25"; but for convenience we start with "0" in 1903. You will note that the period itself really starts with the first of February, 1903, at about "3" and as each little square represents one month, it will be noticed that the first two weeks of February trade conditions remained about constant; but

the last two weeks they advanced about five points to "8." During the month of March trade conditions advanced about one point, while during April they dropped down to about "2." From this point it is very easy to follow trade conditions by the edge of the black area. When this is understood, our periods of depression and prosperity stand out very clearly.

Illustrating How the Figure Was Derived January, 1910.

As during my talks last year in this country and Europe, I was continually being asked how this Composite Plot was made, I will now explain this in detail, taking January, 1910, as a typical month.

First, let me explain the meaning of certain terms:

Actual Figures.—We call all figures as reported, Actual Figures. These are the regular statistics familiar to everyone. These Actual Figures are in many denominations. For example, Bank Clearings are expressed in dollars, Crop Production in bushels, Immigration in number of people arriving, certain railroad statistics in number of cars, etc.

Index Figures.—To combine all these in one figure, it is necessary to do away with these different denominations, and express all in one abstract figure, or Index. That is, all Actual Figures must be compared by means of some one principle.

Scale Figures.—To accomplish this, we introduce a set of intermediate figures called the Scale Figures.

The steps by which these Scale and Index Figures are obtained are as follows: Take, for instance, the Actual Figures for Immigration from 1898 to 1908, inclusive. The Actual Figure, 18,300, for the year 1901 was found to be the lowest for that month of the ten year period and was placed at the lower end of the Scale Table for January. 56,200 (in 1905) was found to be the highest Actual Figure in January during the same time, and was therefore placed at the high end of the Scale Table. The difference between the two Actual Figures was 37,900, which was divided by

10, and the result, 3,790, added to 18,300 to make the second figure, 22,090, added again to that for the next, 25,880, and so on in arithmetical progression up to 56,200, the highest Actual Figure.

In February, the lowest Actual Figure was approximately 23,400, in 1908; the highest, 68,700, in 1906. The difference, 45,300, divided by 10, equals 4,530, which, added to 23,400, gives 27,930, and successively, the other figures opposite February. Working out each month in the same manner, we have as a result a table which gives a scale for each month in which the left and right ends are Actual Figures, and the figures between, proportional or mathematically graded figures. These are what we mean by Scale Figures.

Placing the Index Figures over the Scale Figures.—We then arrange the Scale Figures in columns, placing zero over the the column whose average approximates most closely to the average conditions of the years 1903 and 1904, that is, the depression following the 1903 panic. This date is taken arbitrarily as the starting point of the Barometer. We then place the other Index Figures in series to the left and right of zero.

Extension of Scales.—If the volume of business increases, so as to go beyond the scales, higher scale figures are added, using the same arithmetical progression as at first, so that the actual condition of the years 1898-1908 serves as a *constant* by which to compare succeeding years. Scales similar to this one on Immigration have been prepared for all the subjects, and with these in hand, we are prepared to combine our figures and prepare a Composite Plot.

The next step is to segregate the different subjects into three groups: Mercantile Conditions; Monetary Conditions; and Investment Conditions. The manner of arriving at the Index Figure for each subject is discussed on the following pages.

Mercantile Conditions.

1. Immigration.
2. New Building.
3. Failures.
4. Bank Clearings.

Monetary Conditions.

1. Commodity Prices.
2. Surplus Reserves.
3. Foreign Money Rates.
4. Domestic Money Rates.

Investment Conditions.

1. Condition of Leading Crops.
2. Railroad Earnings.
3. Political Factors.
4. Stock Market Conditions.

The Mercantile Group.

1. Immigration + 44.—We will first obtain an Index Figure for Immigration. The Actual Figure for January, 1910, was 50,243. Consulting our Scale Figures for January, we find that 50,243 is near the high end of the scale, between 48,620 and 52,410; so the Index Figure will be between + 40 and + 50. Or, in detail:

(1) 50,243—48,620 = 1,623, or the difference between the *Actual* Figure and the next lower *Scale* Figure.

(2) $\frac{1,623}{3,790} \times 10 = \frac{1,623}{379} = 4$ (number of points to be added to obtain exact Index Figure).

(3) 4 added to + 40 = + 44, as an index of unskilled labor conditions based upon government figures. *This gives an Index Figure of + 44 for Immigration.*

2. New Building + 73.—We next will take New Building, for which we have an Actual Figure of $33,443,030, which comes between 33,370,000 (+ 70) and 35,900,000 (+ 80).

(1) 33,443,000—33,370,000 = 73,000.

(2) $\frac{73,000}{251,000} \times 10 = \frac{730,000}{251,000} = 3.$

(3) 3 added to + 70 = + 73, as an index of construction work based upon permit figures compiled from the Construction News. *This gives an Index Figure of + 73 for New Building.*

3. Failures O.—During January, 1910, there were some very large failures, which dropped the figure to zero, thus *giving us an Index Figure of O for Failures.* (Owing to the unusually heavy liabilities of these few failures, the Scale Figures would have placed the Index at about—180, a figure not justified by the fundamental conditions in this field.) This figure serves as a very good index of the retail trade, based upon Dun's and Bradstreet's Reports.

4. Bank Clearings + 102.—In the case of Bank Clearings, a *weekly* Index is always used, because in the Weekly Barometer Letter we use the report for the preceding week. The Actual Figures of each month are divided by the number of calendar days in that month, and the quotient multiplied by 7. The result is a set of Scale Figures comparing with the weekly reports. When the monthly figure is used, it is divided by the number of calendar days and the quotient multiplied by 7. Thus, to obtain the Index Figure for January, 1910, the Total Bank Clearings, excluding New York—$5,887,868,000, were reduced to a weekly average.

$5,887,868,000÷31 x 7 = $1,329,714,000.

Proceeding as before:

(1) 1,329,000,000—1,324,000,000 (Index + 100) = $5,000,000.

(2) $\frac{5,000,000}{58,000,000} \times 20 = \frac{100}{58} = 2.$

(3) 2 added to + 100 = + 102, as an index of general trade conditions, based on Clearings as compiled by the W. B. Dana Co. *This gives us an Index Figure of + 102 for Bank Clearings.*

The Monetary Group.

1. *Commodity Prices + 123.*—In the case of Commodity Prices, we use Bradstreet's Index for January 1, 1910, which was 9.23. Proceeding as before:

(1) 9.23—9.20 (Index + 120) = 0.03.

(2) $\frac{.03}{.15} \times 15 = 3.$

(3) 3 added to + 120 = + 123, as an index of domestic requirements for money based upon Bradstreet's Index. *This gives us an Index Figure of* + 123 *for Commodity Prices.*

2. *Surplus Reserves + 66.*—The next subject we come to is Surplus Reserves, and in this case, we use an inverted scale. Heavy reserves like those in 1904 and 1908 are characteristic of a depression. Reduction of reserves, although not favorable in the long run, is, for the purpose of the Index, taken to mean increased business and increased demand for money. Below $5,000,000 this subject is put on what we call the *deficit* scale, declining quickly to zero as the reserves are wiped out, and reading — 66 for a deficit of $50,000,000, as in November, 1907.

Proceeding as usual (but with inverted scale) we find that the January average Surplus Reserves equal $22,708,-081.

(1) 27,500,000 (Index + 60)—22,708,081 = 4,800,000.

(2) $\frac{4,800,000}{7,500,000} \times 10 = 6.$

(3) 6 added to + 60 = + 66, as index of domestic supply of money based upon official bank figures. *This gives us an Index Figure of* + 66 *for Surplus Reserves.*

3. *Foreign Money Rates + 55.*—For indexing both foreign and domestic money rates, the scales are similar. In both cases, the Index Figure advances 10 points to every gain of ¼ of 1 per cent in the actual figures.

In January, 1910, the official rates of the Bank of Eng-

land, Bank of France and the Imperial Bank of Berlin averaged $3\frac{5}{6}$ per cent, giving an Index Figure of + 55, which serves as an index of foreign monetary conditions based upon official reports. *This gives an Index Figure of + 55 for Foreign Money Rates.*

4. Domestic Money Rates + 50.—The average domestic bank rate for January, 1910, was $4\frac{3}{4}$ per cent, giving a figure of + 50, as an index of domestic money conditions showing the confidence of the banking community. *This gives an Index Figure of + 50 for Domestic Money Rates.*

Note: In indexing money rates above 6 per cent an average occurring only in a period of financial disturbance, a panic scale has to be substituted by the statistician in charge, according to conditions shown by a majority of the other subjects. On this panic scale the Index would move to — 60 rapidly when rates were advancing from 6 per cent to 8 per cent or above.

The Investment Group.

1. Crops + 70.—To index the condition of leading crops, Corn and Wheat are added together and the result reduced to an index.

Corn	(1909)	2,772,376,000	bushels
Wheat	(1909)	737,189,000	bushels
Total		3,509,565,000	bushels

(1) 3,509,565,000—3,500,000,000 (Index + 70) = 9,565,000.

(2) $\dfrac{9{,}565{,}000}{70{,}000{,}000} \times 10 = 1.$

(3) 1 added to + 70 = + 71.

This gives an Index Figure of + 71 for the crop situation. During the winter, the crop figure remains stationary, but changes according to scale as soon as the first estimates of the new crop are received. This is the great agricultural index of our nation, based upon government reports.

Therefore, for January, 1910, we use an Index Figure of + 71 *for Crops.*

2. *Railroad Earnings + 82.*—For studying railroad traffic, we use Idle Car Figures as issued from week to week, and the Index is later revised by the statistics for the gross earnings of 10 railroads. January gross earnings were $55,828,736.

(1) 55,828,000—55,488,000 (Index + 80) = 340,000.

(2) $\frac{340,000}{1,894,000} \times 10 = 2.$

(3) 2 added to + 80 = + 82 as an index of investment earnings based upon official figures of our own compilation. *This gives us an Index Figure of* + 82 *for Railroad Earnings.*

3. *Political Factors + 70.*—This factor has been added by request, but is used with an arbitrary Index Figure, no Scale or Actual Figures being obtainable. The Index for Political Factors stands at + 70 for ordinary conditions, and is modified according to the opinion of the office as to the relative importance of ordinary current events. *This gives us an Index Figure of* + 70 *for Political Factors.*

4. *Stock Market Conditions + 65.*—The average of the high and low points in January for the 20 Railroads = 125.40.

(1) 125.40—125.00 (Index +60) = .40

(2) $\frac{.40}{1.25} \times 5 = 2.$

(3) 2 + 60 = + 62.

The average of the high and low points of 12 Industrials in January was 94.50.

(1) 94.50—93.75 (Index + 55) = .75.

(2) $\frac{.75}{1.25} \times 5 = 3.$

(3) 3 + 55 = + 58.

Averaging 62 and 58, gives as an Index Figure for the whole

group of stocks, + 60, provided no weight is given to the number of shares traded in, which for January, 1910, was 24,538,649, or an average of 5,540,000 per week. When the average figure for the stocks in a "bull" market is between + 60 and + 80, we add 5 for every million in excess of 5,000,000 shares traded in, per week, or subtract 5 for every million under that figure. In this instance, we add 5, making the Stock Market Index + 65, based upon actual quotations of our own compilation. *This gives us an Index Figure of + 65 for Stock Market Conditions.*

Summary Figures.

Mercantile + 64.—The result of the preceding is that for the Mercantile Group we have:

1. Immigration	+ 44
2. New Building	+ 73
3. Failures	0
4. Bank Clearings, + 102, which in order to give double weight, we consider	+ 204
This makes a total of	+ 321
Divided by 5, gives a Summary Index Figure for Mercantile Conditions of	+ 64

Monetary + 69.—In the same way, we have Index Figures for the Monetary Group as follows:

1. Commodity Prices	+ 123
2. Surplus Reserves	+ 66
3. Foreign Money Rates	+ 55
4. Domestic Money Rates, + 50, to which we also give double weight, calling it	+ 100
This makes a total of	+ 344
Divided by 5, gives a Summary Index Figure for Monetary Conditions of	+ 69

Investment + 71.—In the same way we add together the Index Figures on Investment Conditions, viz.:

1. Crops	+ 71
2. Railroad Earnings	+ 82

3. Political Factors	+ 70
4. Stock Market Conditions, + 65, which we double, and consider	+ 130
This makes a total of	+ 353
Divided by 5, gives a Summary Index Figure for Investment Conditions of	+ 71

Final Summary.—The final step is to add these three independent Summary Figures, viz: + 64 + 69 +71 = + 204, and to divide by 3, which gives us a Final Summary Index Figure of + 68. *This is the figure appearing on the Composite Plot.*

In all these processes, the Index Figure is obtained from the Actual Figure in one way. The Scales and Indexes are all made up on the same principle; the only differences are those which have been needed for small adjustments as described under Money Rates, Surplus Reserves, and Share Transactions. The only feature wherein the personal equation enters, is in the weighting or the doubling of the Index Figures on *Bank Clearings,* under the Mercantile Group, of *Domestic Money Rates,* under the Monetary Group, and of *Stock Market Conditions*, under the Investment Group. This results in giving us 13⅓ per cent to these three subjects, and 6⅔ per cent to each of the other nine, which makes a total of 100 per cent.

So much for the theory and the mechanical end of the work. Now a word as to its application.

Why Manufacturers and Merchants Should Study the Composite Plot.

1. The Composite Plot aids the Credit Department.

The most successful manufacturers and merchants have found that the system of "*fixed*" credit limits for customers is absolutely wrong in principle, unjust to customers, unfair to the sales force and a source of danger to the firm.

Instead, they use a system of "*flexible*" credit limits by

Scale Table on Immigration.

TABLE SHOWING ACTUAL FIGURES FOR IMMIGRATION REDUCED TO AN INDEX SCALE.

Index.	—40	—30	—20	—10	0	+10	+20	+30	+40	+50	+60
January..........	*18,300	22,090	25,880	29,670	33,460	37,250	41,040	44,830	48,620	52,410	56,200
February........	23,400	27,930	32,460	36,990	41,520	46,050	50,580	55,110	59,640	64,170	68,700
March...........	32,500	43,160	53,820	64,480	75,140	85,800	96,460	107,120	117,780	128,440	139,100
April............	41,300	52,210	63,120	74,030	84,940	95,850	106,760	117,670	128,580	139,490	150,400
May.............	36,300	51,160	66,020	80,880	95,740	110,600	125,460	140,320	155,180	170,040	184,900
June.............	19,900	33,310	46,720	60,130	73,540	86,950	100,360	113,770	127,180	140,590	154,000
July.............	27,600	34,550	41,500	48,450	55,400	62,350	69,300	76,250	83,200	90,150	97,100
August..........	27,800	34,900	42,000	49,100	56,200	63,300	70,400	77,500	84,600	91,700	98,800
September.......	38,200	44,250	50,300	56,350	62,400	68,450	74,500	80,550	86,600	92,650	98,700
October.........	41,000	48,050	55,100	62,150	69,200	76,250	83,300	90,350	97,400	104,450	111,500
November.......	38,000	45,950	53,900	61,850	69,800	77,750	85,700	93,650	101,600	109,550	117,500
December.......	37,500	42,300	47,100	51,900	56,700	61,500	66,300	71,100	75,900	80,700	85,500

* Number of arrivals: Actual figures: the first column contains the minimum number of arrivals in each month, the extreme right hand column the largest number in the same month in any of the years 1898 to 1908 inclusive. The figures between are scale figures.

which credits are increased and decreased in accordance with the relation between *present* and *normal* business and monetary conditions. *This system invariably results in greatly increased sales* and yet insures that a firm shall be in a strong financial position at a time of panic or business crisis. A study of failures shows that the majority are due to unwieldy "notes payable."

The Composite Plot enables firms to keep accurately informed as to present and future trade conditions and to know whether to buy more merchandise or not, whether to expand or to contract, whether to branch out or go slowly. No large sums of money are made today by simply buying and selling in the same market. The most successful wool merchants, the most successful steel contractors and the wealthiest lumber dealers are those who study trade conditions and buy when every one else is down and out and liquidate when all their competitors are optimistic and expecting more business. How did J. P. Morgan's father make his money in the dry goods business? How did Carnegie make his money in the steel business? How did Marshall Field make his? These men studied fundamental conditions and bought or sold, contracted or expanded, in accordance with what these black areas show.

3. But, granting that your credit system is satisfactory—and it isn't unless you use flexible credits—and granting that you now usually buy at the lowest and sell at the highest, you still need to watch this Composite Plot.

4. *Why?* Because it is easier to sail with the wind than always against it. Whatever your policy, whatever your line of business, you employ capital, you own or rent a building and usually have employes, and, in every move you make from the time you enter your office in the morning until you leave at night, you should have in your mind a definite idea as to whether we are having a period of prosperity or a period of decline and about when the change may be expected.

And now a word regarding the general investment of money.

The Composite Plot Shows When to Buy and When to Sell Securities.

The idea that one should invest money as soon as it accumulates, is absolutely wrong. The most successful investors are those who confine their purchases to high-grade securities and devote their attention to determining *when* to buy, *when* to sell and *when* to remain out of the market. Conditions are always suitable for one of these three courses, and the Composite Plot always shows which of the three courses one should pursue. Moreover, by a study of this plot, it is possible to determine, with absolute accuracy, the present condition of the country and the exact relation between said *present* conditions and what would be normal conditions. This relation shows whether higher or lower security prices may be expected. Of course, no plots are of any use for forecasting daily or weekly movements; but, when correctly interpreted, this Composite Plot unfailingly shows the trend of trade, money rates and investment prices.

For years, fundamental statistics have been accumulated, analyzed and studied by the most successful investors. By use of the Area Theory, my book, "Business Barometers," shows how $2,500 invested, about forty-five years ago, in the most conservative stocks of that day, such as Lackawanna, Illinois Central, New York Central, etc., (which, moreover, were then selling almost as high as in 1907), would now amount to over $1,800,000 if said stocks had been bought and sold in accordance with what fundamental statistics have clearly shown. Said investor could have confined his investments strictly to those ten high-grade securities—without borrowing or buying on margin—and moreover would have bought and sold only eight times, making a total of only sixteen transactions with an

average of about three years apart. If this illustration were based on highest and lowest prices, or if intermediate movements were considered, or if less conservative stocks were purchased, the result might be made much larger. Our illustration eliminates risk, chance and extraordinary conditions and shows only what any person with $2,500 can safely accumulate in a comparatively few years, by simply following the system of waiting until the early part of an area below the line of growth has been formed and then buying outright high-grade dividend-paying stocks, holding these stocks until this area has been wholly completed and a prosperity area above the line has got well underway—say ¼ consumed—when these stocks should be sold. The money should then be kept in trust companies on deposit or invested in short-term notes or commercial paper until this prosperity area is completed and an area below the line of growth has been started, when the same stocks may be purchased again.

To forecast trade conditions, four steps are necessary:

1. Accumulating each week the data on these various subjects and reducing each set of figures to common denominators.

2. Combining each week all of these common denominators into one figure, using the same to extend this Composite Plot.

3. Interpreting this plot based on the "law of action and reaction" to determine in what period we now are and what will be the next period.

4. Watching this chart each week to study the "rate of flow" and to determine when the next period will be at an end.

Practical Uses of the Work.

As stated, this Composite Plot shows us to be now on the ebb tide and that we are facing a period of readjustment; but as to when this readjustment is coming and

whether it will come in the form of a panic or a dull period of depression can only be based on the present "rate of flow."

I have endeavored briefly but conscientiously to cover the subject assigned me. I have endeavored to explain my work in an honest, frank manner, showing you its weaknesses, as well as the strength thereof. Although I have emphasized the fact that the Area Theory is absolutely sound, I have taken pains to mention that in the application of the theory certain assumptions must still be made. However, this is true with every science, and even the great physician or surgeon who receives a fabulous sum for an hour's work will tell you that probably twenty years hence he will look back with shame upon the work he is doing today.

Therefore, although the science is by no means perfect, yet I wish to impress upon you that it has reached a stage where it demands your most careful attention. Therefore, whether or not you agree with my conclusions, I beg of you to give the work your most careful and conscientious study and deduce conclusions for yourself.

The future of this nation does not depend on its battleships or its railroad rates, its statesmen, its diplomats, but rather upon the integrity and strength of our great industries, and *especially* upon you business men and young men who are a distinct factor in the operation of these industries. Our nation is just like a big rough boy, needing to be curbed during its prosperity, needing to be encouraged and cheered up during its depression, and, as I have preached from the Atlantic to the Pacific, for each additional one of you who begins to study this work, the coming period of depression will be so much less severe and the nation's industries will permanently be on a sounder and stronger basis.

So much for the theory and the mechanical end of the work; now a word as to its application.

Why Successful Bankers Should Watch the Composite Plot.

Most banks expend too little time and money studying fundamental statistics and in forecasting future money conditions.

With a general foreknowledge of the tendency of rates, a bank may so arrange its maturities as to obtain at least one-half of one per cent more on outstanding loans than is possible without such knowledge. It may be necessary to allow a customer to choose either the "rate" or the "maturity"; but banks should insist upon their right to fix the other factor, and, doing so, should have in mind the tendency of the money market. If the tendency is upward and the borrower desires to pay only the market rate, the bank should insist on a short loan; while if the borrower desires a long-time loan, the bank should insist on a rate above current market prices. The reverse is true if the tendency of money is downward. (See money line on Composite Plot.)

To buy bonds when money is cheap, in order to obtain a higher income than can be obtained on notice, is a very dangerous practice, as banks then purchase bonds after the price has advanced and are often compelled to sell them at a loss during the next money stringency or else refuse accommodation to customers. By studying this Composite Plot, however, a bank may safely purchase high-grade securities with the expectation of later selling them at a profit, because such banks know when the time for selling said securities is at hand. The most conservative banks purchase *for permanent investment* only government and such bonds as can be counted as "Reserve," and purchase general corporation bonds *only for the purpose of selling again* at a profit in the course of a short time. In other words, they buy bonds preceding a period of cheap money when bonds are always low, and sell them before money again becomes high.

Such banks not only receive an income of about 4 per cent upon such securities and a profit of from 10 per cent to 20 per cent when they sell, but also are always in the strongest possible condition with very large reserves at the time of a crash or money stringency. Therefore, the study of fundamental statistics and especially this Composite Plot, not only enables banks to receive greater income from their loans and larger profits from the purchase and sale of securities, but insures that such banks buy only the highest grade of securities and, moreover, sell them before the money is needed for customers.

Why Bond Dealers and Stock Brokers Should Watch This Composite Plot.

During twelve years given exclusively to work for the largest bond and stock exchange firms, I have found that some firms are always prepared for every change in monetary and investment conditions and universally profit thereby, while others are often unprepared and either sustain losses or are handicapped by heavy commitments. *Moreover, in nearly every case, I found that these most successful firms gave much study to fundamental statistics and based their business policy in accordance with what such statistics foretold.* Firms who have watched these figures during the past years have always been prepared for every period of high prices by having previously purchased large amounts of long-term bonds at low prices. As money rates have increased, such firms and their customers have gradually reduced their loans and changed securities. By such a policy they are always able to trade at the market and still make a profit. When these figures have foretold a coming period of money stringency, such firms have purchased and recommended only short-term notes* and bonds maturing within

*Many do not become interested in short-time notes until money rates are high and when investors should be buying long-term bonds. Of course this is the time for corporations to become interested therein, but not bond dealers, who should purchase and recommend short-time notes *before* money rates are high and when bonds are selling at top prices.

one or two years, which insured that they and their customers would at critical times have large cash balances in order to take advantage of the next period of low prices. Such firms not only make great profits, while at the same time keeping themselves in an impregnably strong financial condition, but create a most loyal and valuable clientele. Therefore, all bond dealers and brokers should constantly watch this Composite Plot to forecast trade conditions.

WALL STREET PHRASES AND METHODS.

BY JOHN MOODY.

[Author of "The Truth About the Trusts"; Editor of "Moody's Manual of Railroad and Corporation Securities," etc.]

In the Wall Street field many terms and phrases are used which are not familiar to the outsider and therefore require definition in a book of this kind. In fact, many practical Wall Street people, while clearly understanding the meaning of such and such a phrase or word, cannot always concisely define it, or convey its exact meaning to the inquirer. In the following pages the chief terms and phrases relating to the modes and general mechanism of the Street are briefly defined and explained. The various words or phrases are taken up in alphabetical order.

Arbitrage. The buying and selling of the same security in different markets, as New York and London, or New York and Chicago, for the purpose of making a profit from the difference in quotation between the two markets. This trading is of course based on temporary differences in prices between the markets, which are due from some special cause. If all things were equal every stock would, of course, have the same value in every market in which it is dealt in. There are two kinds of arbitrage dealings in stocks between New York and London. One operation is known as the "spread" and the other the "back-spread."

Averaging. This is a speculative term which is used to describe purchases or sales of stock which are made when the market is rising or falling, as the case may be, for the purpose of improving the position of the buyer or seller in the matter of his average price for all his securities. For instance, if 100 shares are purchased at 95 and the price declines to 75, the averager will purchase another

hundred shares at 75, thus bringing the average cost of his total holdings to 85. Hence, as soon as the price of the stock recovers to over 85 he will have a profit on his entire transactions.

Bear. This is the name for a speculator who sells stock short in expectation of buying it back at a lower price. In order to do this he of course borrows a certificate to deliver against his sale, and when he has bought in or "covered" he uses the new bought certificate to repay the loaner.

Bill of Exchange. This is a written order or request from one person to another for payment to a third party, the amount paid being charged to the one who issues or signs the bill. There is in reality no difference between a "bill of exchange" and an ordinary draft, but the former term is commonly applied to an order for money payable in a foreign country, whereas the same sort of order payable within the country of its origin is known as a "draft."

Blind Pool. A blind pool in the stock market is one where the members join together and contribute capital, agreeing that only the manager shall have full charge of the pool and know in what way the money is to be used. Blind pools are not confined to stocks but may be carried on in a scheme of almost any nature.

Bobtail Pool. This is a term which usually applies to a small or informal pool in stocks. In such cases the members join together to move the stock either up or down and then each is usually allowed to suit his own pleasure in closing out his interest in the pool.

Bucketing. This is a term used to describe sales made by a broker for his own account and risk against customers' purchases or purchases by the broker against customers' sales. It is a reprehensible practice and is usually done to enable the broker to speculate against his customers' trades. In such instances the broker wins if his customers lose, or he loses if his customers win.

Bucket-Shop. This is a place usually advertised as a brokerage office where bets are made on regular stock exchange quotations. No actual transactions take place. Usually money is put up by the customer and a commission is charged for buying and selling the same as on a regular exchange. When the quotations show a profit to the customer, he is privileged to demand his profit; when the limit of the customer's margin has been reached in the price of the stock, the customer has lost his bet and his money and is "wiped out."

Call. A call on a stock is a contract or agreement binding the issuer to deliver to the holder of the call the stock named therein within a certain time, at a certain price, if the holder shall so demand. For instance, the one issuing a call will agree to deliver one hundred shares of a specified stock within thirty days at 110 if the purchaser makes a demand for it. Should the stock be selling at 106 the issuer of the call may be able to sell his promise for $100. The purchaser of the call will then hold the same, and if the stock rises above 111 within the thirty days he will call upon the issuer for the hundred shares at 110 and probably sell the same in the market at or over 111, thus realizing a profit. A contract of the same kind applying to the short side of the market is known as a "put."

Corner. A corner in a stock is caused by the purchase by a pool or other interest of all the floating or purchasable stock of the company, after which the price can be advanced at the will of those creating the corner. Speculators who are short of the stock and are unable to buy or borrow to make delivery or return stock which they have borrowed, are thus forced into a corner and "squeezed." They must settle with the buyers at the buyers' own prices.

Covering. This is a term used in the stock market to describe the act of buying stocks or commodities for the purpose of closing short contracts—buying back stocks previously sold but which were not possessed when sold.

Due Bill. In stock exchange parlance a due bill is a promise to pay a dividend which has been declared but has not yet been paid by the company. For instance, a stock certificate may be purchased in the market after the transfer books of the corporation have been closed, or the transfer of the stocks may not have been made, but by agreement the dividend is to go to the purchaser, and not to the party in whose name the certificate stands. When the dividend is paid to the original party the due bill is presented to him and he passes the dividend over to the purchaser.

Flat. This signifies "without interest." When bonds are sold flat no charge is made to the buyer for the accrued interest, as the interest is included in the price of the bond. On the New York Stock Exchange all bonds are sold at "flat" prices, but in private transactions a large majority of the sales are made on an "accrued interest" basis. The term "flat" is also used in relation to the lending of stocks. When stocks are lent flat the lender does not pay interest to the borrower of this stock. Otherwise the borrower will pay the lender the market value of the stock and the lender will pay interest to the borrower on his money.

Giving up. This term is used in the stock markets to describe a broker who executes an order for another broker and whose connection with the transaction then ends. In reporting to the broker to whom he sells or from whom he buys the name of the broker for whom he is acting, he is said to "give up" the latter. The latter receives the stock and completes the transaction.

Hypothecation. This signifies the pledging of securities or other property as collateral for loans. In Wall Street, where stocks are purchased on margin and carried by a broker for his customer, they are usually hypothecated, or deposited as collateral in loans with banks or trust companies or other loaners of money. In this way the broker secures the capital to carry the stocks for his customer.

Irish Dividend. This is a term sometimes used to describe not a dividend, but an assessment on a stock.

Joint Account. The term for a transaction in which two or more brokers or speculators join together for their mutual benefit or risk in carrying through a transaction.

Long of stocks. This is the phrase used when a speculator is a bull; that is to say when his account shows a balance of stocks on the long or bull side. The opposite condition is to be short of stocks and be on the bear side.

Manipulation. This word applies to the operation of working stocks both up and down on the exchanges, both ways at once. A well-known method of manipulating a stock is to put through on the exchange a number of fictitious sales, one broker agreeing to purchase at a certain price from another and the latter then agreeing to repurchase the same stock at the same or another price. This arrangement is sometimes carried on between various brokers, each transaction being offset in some way by another. As a result there may be a large number of quotations reported with no actual sales. These quotations are commonly known as "wash" transactions, and the purpose usually is to create outside interest in the stock and start a speculation in it among genuine buyers and sellers.

Margin. This is the word used to describe money deposited with a broker for speculation in stocks, grain or other commodities. In stocks the margin required ranges from 5 per cent to 30 per cent, dependent upon the character of the security purchased. The average margin is 10 per cent, which amounts to $1,000 on the ordinary one hundred shares of stock. The margin protects the customer down to a price ten points below the price he has paid, if he is long of stock, and ten points above the price he has received if he is short of the stock. As his margin becomes narrower because of the change in the market prices he is required to put up more money or else have his account closed out.

Outside broker. This term describes a broker who is not a member of the regular exchange, but who deals in securities either on the streets or elsewhere. In New York City an outside broker is one who deals in what is known as the outside market or on the curb. There are nowadays a very large number of stocks and bonds which are traded in in this outside market, and these outside brokers usually conduct just as legitimate a business as those who make trades on the stock exchange.

Passing a dividend. This does not mean declaring a dividend, as many people assume, but it means failure to declare a dividend that had previously been regularly paid. When the company specifically states that it will not pay a similar dividend to that which previously had been paid, then it is said that the dividend is stopped. But when no official action is taken and the dividend simply is not declared by the directors, it is said to have been "passed."

Privilege. This is a general name for a call, a put, a spread or a straddle, information as to each of these terms being supplied under their own headings. In any kind of privilege the purchaser of the same is not liable for loss beyond the amount actually paid for it.

Put. A put on a stock is the reverse of a call, being a written contract or agreement binding the issuer to receive from the holder the stock named in the agreement within a certain time at a certain price if the holder shall so demand. The act of delivering such stock to the issuer of the contract is generally known as "putting" the stock.

Pyramiding. This describes operations by the use of paper profits made in transactions not yet closed and, therefore, not yet in hand. For instance, one may purchase one hundred shares of stock at 50 on a margin of 10 per cent of the par value. If the stock advances to 60 the purchaser will then have 20 per cent margin and he will purchase one hundred shares more. If the price then goes to 70 he will purchase two hundred shares more, giving him four hun-

dred in all. If it next goes to 80 he will then purchase four hundred shares more, giving him eight hundred shares in all, on which he has a margin of 10 per cent, or $8,000. Up to this point his paper profits will be $7,000. If the market continues in its rise, he will continue accumulating stock until his account shows very large accumulated paper profits. If he then sells out he will have turned his profits into cash, but if the market suddenly drops ten points he will not only have lost the profit on the last transaction, but will have lost everything. In other words, the inverted pyramid will have fallen and ruined him in the crash.

Spread. A spread is a put and call combined and is practically the same as a straddle. If the stock goes below the price named in the put end, plus the cost of the spread, the holder makes a profit; also if the stock goes above the price named in the call end, plus the cost of the spread, the holder of the spread also profits. In other words, the purchaser of a spread is said to "play the two ends against the middle"; he has two chances to make money and his loss in any case is limited to the cost of the spread.

Straddle. A straddle is similar to a spread with the exception that only one price is named in it. The stock may be called for or delivered at this one price only. As in the other cases, the stock must go up or down more than the amount paid for the straddle before there is a profit in it.

Under the rule. This is a term used to describe an official transaction made on the New York Stock Exchange. In case a member of the Exchange fails to receive or deliver stock in accordance with his contract of purchase or sale, the stock in question is bought or sold, as the case may be, by the chairman of the Exchange for the account of the delinquent member, and any difference in cost is charged or credited to him. When transactions of this kind are put through they are known as purchases or sales made "under the rule."

Washing. This term describes the operation of simul-

taneous buying and selling the same stocks for the purpose of making quotations and inducing outside speculation or interest in the stock by imparting apparent activity to it. Washing is usually employed when manipulation of some kind is in progress.

Watered stock. A term used to describe the capital stock of a company which is not supposed to be represented with a corresponding amount of assets. The term as used is a vague one and is subject to several interpretations. For instance, when a stock dividend is declared the original stock is said to be watered to that extent, unless the newly issued stock represents added property or value in some form.

Ex-dividend. When a stock upon which a dividend has been declared is sold and the price is not to include the amount of the dividend to be shortly paid, the stock is said to be sold "ex-dividend."

In Wall Street no one is always right; cheap advice is plentiful; some men learn only by failing; losses make us more cautious; interrogate before you negotiate; money is most valued when lost; don't buy an egg until it is laid; fraud is built on misrepresentation; speculation begins when certainty ends; opportunity is often lost by deliberating; get information before you invest, not after; get an investment that will let you sleep; it is idle to wait for your ship to come in unless you have sent one out; those who lament their misfortunes are generally they who do not recognize their opportunities; buyers of stock belong to two classes: those who trade on tendencies and who take hold wherever the market is active without much reference to values or prices, and those who always try to buy when prices are down instead of when they are up.

In Wall Street the investor determines the prices of stocks in the long run. This statement is sometimes disputed by those who point to the fluctuations which are confessedly made by manipulators without regard to value.

It is true that such fluctuations do occur, but when the manipulation is over the influence of the investor is again felt. If he decides that a given stock is worth only so much the manipulator will ultimately be compelled to accept that valuation, because manipulation cannot be kept up. The general object of manipulation is to buy below value and sell above value.

"An important influence of the stock exchanges, and in some ways also of the produce exchanges, is the influence they exert upon the money market. The possession by any country of a large mass of salable securities affords a powerful guarantee against the affects of a severe money panic. If in New York there arises a sudden pressure of money, so that confidence becomes impaired and people having contracts entitling to future or immediate delivery of money insist that these contracts shall be executed in money instead of other forms of promises, what happens? The banks call in loans and begin to hold their cash. If they hold large quantities of securities salable on the London, Paris or Berlin market a cable order will affect the sale of these in an hour, and the gold proceeds will be on their way across the Atlantic in a day.

"Wonderful has been the effect within the last twenty-five years of this steady influence of the stock market upon the demand for money and upon the smoothness of the operations of the mechanism of the exchanges. What has just been put in a crude form by referring to a crisis occurs daily and hourly on the stock exchanges, and prevents sudden contraction and expansion in the rate for loans. The manufacturer goes placidly on paying his 4 or 5 per cent for commercial loans, when if there were no stock exchanges where securities could be sold in one market at a slight profit over another, he would find that his bank was first charging 7 or 8 per cent, then dropping to 3 or 4 and then going back to 8. By means of the facilities which the stock market affords for placing credit instantly at the

command of one market or another the pressure for money is mitigated, and has put a limited effect upon the commercial borrower. Such pressure as now occurs is transferred to the borrower on call—the broker in stocks, who thus acts as insurer for the commercial borrower. This influence of the stock market has much the effect of a buffer upon the impact of two solid bodies. Crises are prevented when they can be prevented, and when they cannot they are anticipated, and their force is broken into a mild succession of ripples instead of a tidal wave."—Chas. A. Conant, "Wall Street and the Country."

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INVESTMENTS AND SPECULATION

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